

265 East 100 South Suite 350
Salt Lake City, Utah 84111-1604
Ph (801) 521-8564 Fax (801) 355-2938

CONSULTANT INFORMATION			

KEYED NOTES			
01	EXISTING BUILDING TO ABE DEMOLISHED - TAKE	PECAUTIONS TO SALVAGE EXISTING UTILITY	
	SERVICES - RELOCATE AS REQUIRED - SEE MECH.		
02	EXISTING BUILDING SLAB TO BE DEMOLISHED		
03	EXISTING SLAB UNDER GENERATOR TO REMAIN.		
04	GENERATOR TO REMAIN - SEE ELECTRICAL FOR	CONNECTIONS TO BUILDING SYSTEM.	
05	EXISTING DROP GATE TO BE REMOVED AND	RELOCATED	
06	EXISTING J-BOX FOR EXISTING ELECTRICAL PANEL	MAIN TO BE REMOVED AND ABANDONED - SEE	
	ELECTRICAL		
07	EXISTING J-BOX - APPEARS TO BE WIRING FOR	SPRINKLER SYSTEM - RELOCATE AND TIE BACK INTO	
	ELECTRICAL SYSTEM AS REQUIRED TO MAINTAIN	FUNCTIONALITY	
08	EXISTING SPRINKLER VALVE BOX TO REMAIN		
09	EXISTING SPRINKLER HEAD TO REMAIN - REPAIR	ANY DAMAGE TO SPRINKLER SYSTEM CAUSED BY	
	CONSTRUCTION.		
10	EXISTING SPRINKLER QUICK CONNECT TO REMAIN		
11	FIRE HYDRANT TO REMAIN		
12	EXISTING LIGHT POLE TO REMAIN		
13	EXISTING BOX WITH GROUNDING ROD TO REMAIN		
14	EXISTING SIDEWALK TO REMAIN		
15	EXISTING SIDEWALK TO BE REMOVED AS REQUIRED	FOR CONSTRUCTION OF NEW BUILDING	
16	EXISTING CURB TO REMAIN		
17	EXISTING CURB TO BE REMOVED AS REQUIRED	FOR CONSTRUCTION OF NEW BUILDING	
18	EXISTING GATE TO REMAIN		
19	EXISTING FENCE TO BE REMOVED AS REQUIRED FOR	CONSTRUCTION AND REINSTALLED UP TO THE	
	EDGE OF NEW CONCRETE SIDEWALK		
20	PROVIDE 24" X 22" CEILING ACCESS PANEL - FIELD	LOCATE BETWEEN TRUSSES	
21	5/8" GYP BOARD CEILING		

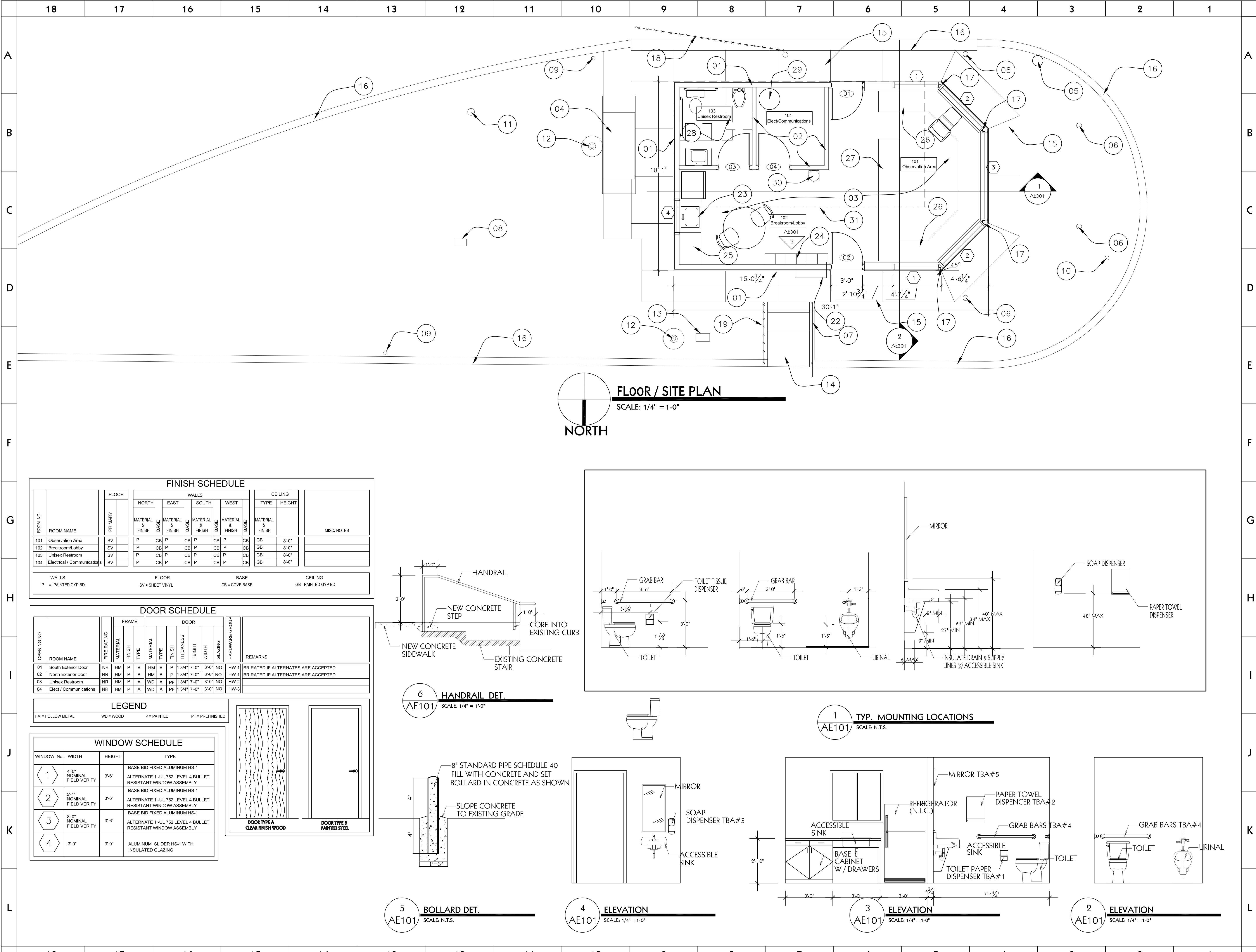
GENERAL NOTES			
01	REPAIR LANDSCAPING BACK TO ORIGINAL	CONDITION WHERE DAMAGED DUE TO	
	CONSTRUCTION		



Utah National Guard

New Guard House
CAMP W.G WILLIAMS, UTAH

SHEET TITLE			
DEMO/CEILING PLAN			
REVISIONS	DATE	BY	DESCRIPTION
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DRAWN BY		CHECKED BY	
JRA		ERT	
PROJECT NO.		DRAWING NO.	
06286480		AD101	
DATE			
9-7-06			



CONSULTANT INFORMATION

KEYED NOTES

- 01 2" X 6" WOOD STUD WALL - SEE SECTION
02 2" X 4" WOOD STUD WALL 3/8" GYP BOARD EACH SIDE
03 CONCRETE SLAB - SEE FINISH SCHED FOR FINISHES
04 GENERATOR TO REMAIN - SEE ELECTRICAL FOR CONNECTIONS TO BUILDING SYSTEM.
05 EXISTING DROP GATE REMOVED DURING DEMOLITION TO BE RELOCATED - COORDINATE LOCATION WITH UTAH NATIONAL GUARD
06 NEW 8" BOLLARD
07 NEW HAND RAIL - SEE 6/AE101
08 EXISTING SPRINKLER VALVE BOX TO REMAIN
09 EXISTING SPRINKLER HEAD TO REMAIN - REPAIR ANY DAMAGE TO SPRINKLER SYSTEM CAUSED BY CONSTRUCTION
10 EXISTING SPRINKLER QUICK CONNECT TO REMAIN
11 FIRE HYDRANT TO REMAIN
12 EXISTING LIGHT POLE TO REMAIN
13 EXISTING BOX WITH GROUNDING ROD TO REMAIN
14 EXISTING SIDEWALK TO REMAIN
15 NEW 3' - 0" WIDE SIDEWALK AROUND NEW BUILDING
16 EXISTING CURB TO REMAIN
17 3" X 3" TUBE STEEL COLUMN CENTERED IN CONCRETE WALL BELOW - SEE STRUCTURAL
18 EXISTING GATE TO REMAIN
19 EXISTING FENCE REMOVED AS REQUIRED FOR CONSTRUCTION TO BE REINSTALLED UP TO THE EDGE OF NEW CONCRETE SIDEWALK
20 8" CONCRETE WALL WITH FIXED ALUMINUM WINDOWS F-1 ABOVE - WINDOWS TO BE LEVEL 4 BALLISTIC REATED IF ALTERNATE #1 IS ACCEPTED.
21 FURNITURE BY OTHERS (NIC)
22 COMBINATION HEATING AND COOLING UNIT - SEE MECHANICAL.
23 ACCESSIBLE SINK
24 LOCKERS
25 BASE CABINET
26 COUNTER WITH BASE CABINETS BELOW/
WALKUP COUNTER WITH CABINETS BELOW
27 UNISEX RESTROOM SEE MECHANICAL FOR FIXTURE TYPE - SEE 1/AE101 FOR MOUNTING LOCATIONS
29 WATER HEATER - SEE MECHANICAL
30 BOTTLE WATER COOLER BY OTHER (N.I.C.)
31 LINE SHOWING WHERE OLD EXISTING BUILDING WAS LOCATED



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SHEET TITLE

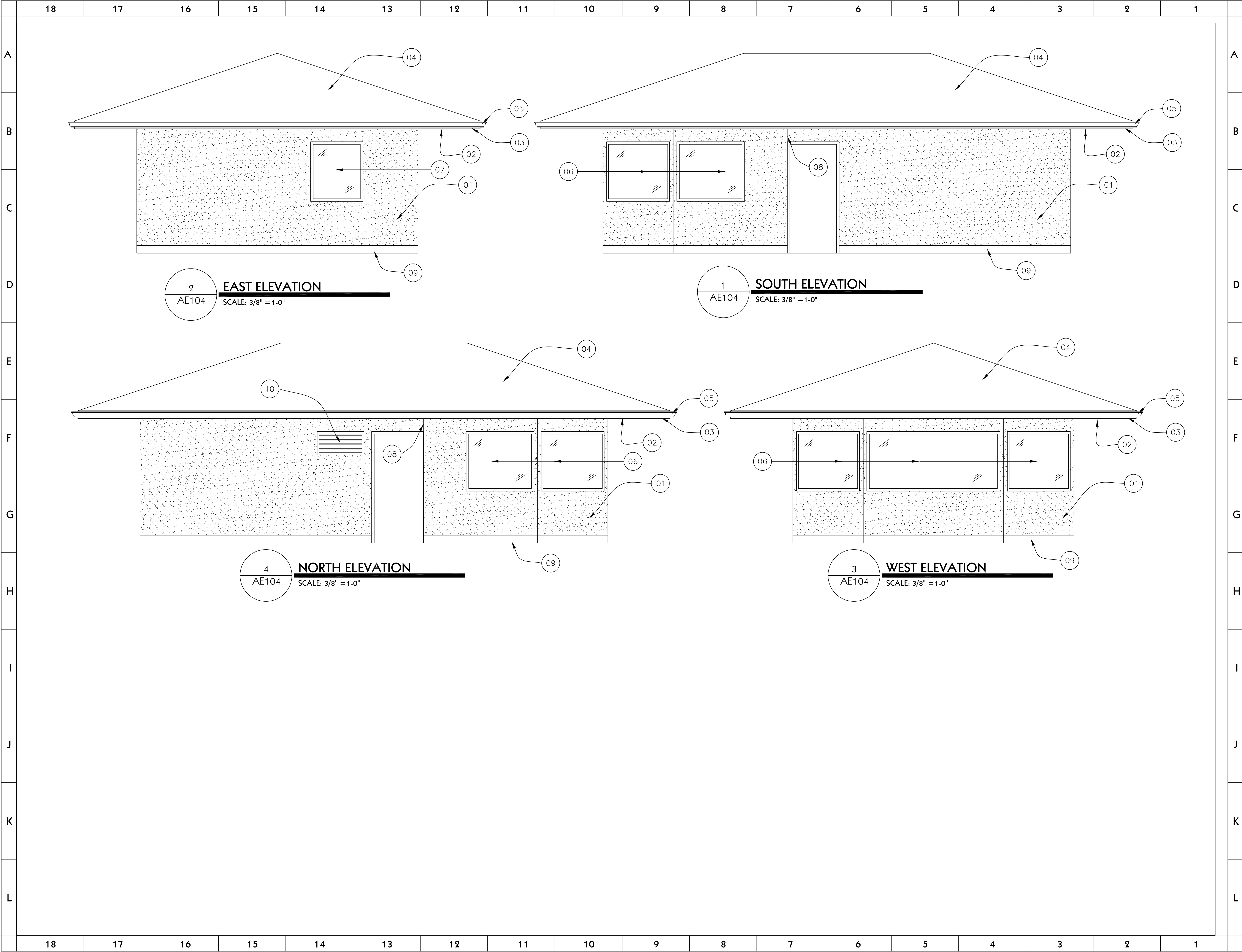
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CHECKED BY: ERT

PROJECT NO: 06286480
DRAWING NO:

DATE: 9-7-06
AE101



CONSULTANT INFORMATION

KEYED NOTES

- 01 EFIS SYSTEM ON ALL EXTERIOR WALLS
- 02 PERFERATED SOFFIT
- 03 ALUMINUB FACIA
- 04 ASPHALT SHINGLE ROOF
- 05 RAIN GUTTER ON ALL 4 SIDES - DRAIN TO NORTH SIDE DOWN SPOUTS
- 06 FIXED ALUMINIUM WINDOW F-1
- 07 ALUMINIUM SLIDER HS-1 WINDOW
- 08 PROVIDE EXPANSION JOINT IN EFIS SYSTEM AT JUNCTURE OF CONCRETE WALL AND WOOD FRAMED WALL
- 09 FOUNDATION 6" ABOVE FLOOR AND SIDEWALK
- 10 MECHANICAL UNIT - SEE MECHANICAL

GENERAL NOTES

01



Utah National Guard

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CAMP W.G.WILLIAMS, UTAH

SHEET TITLE

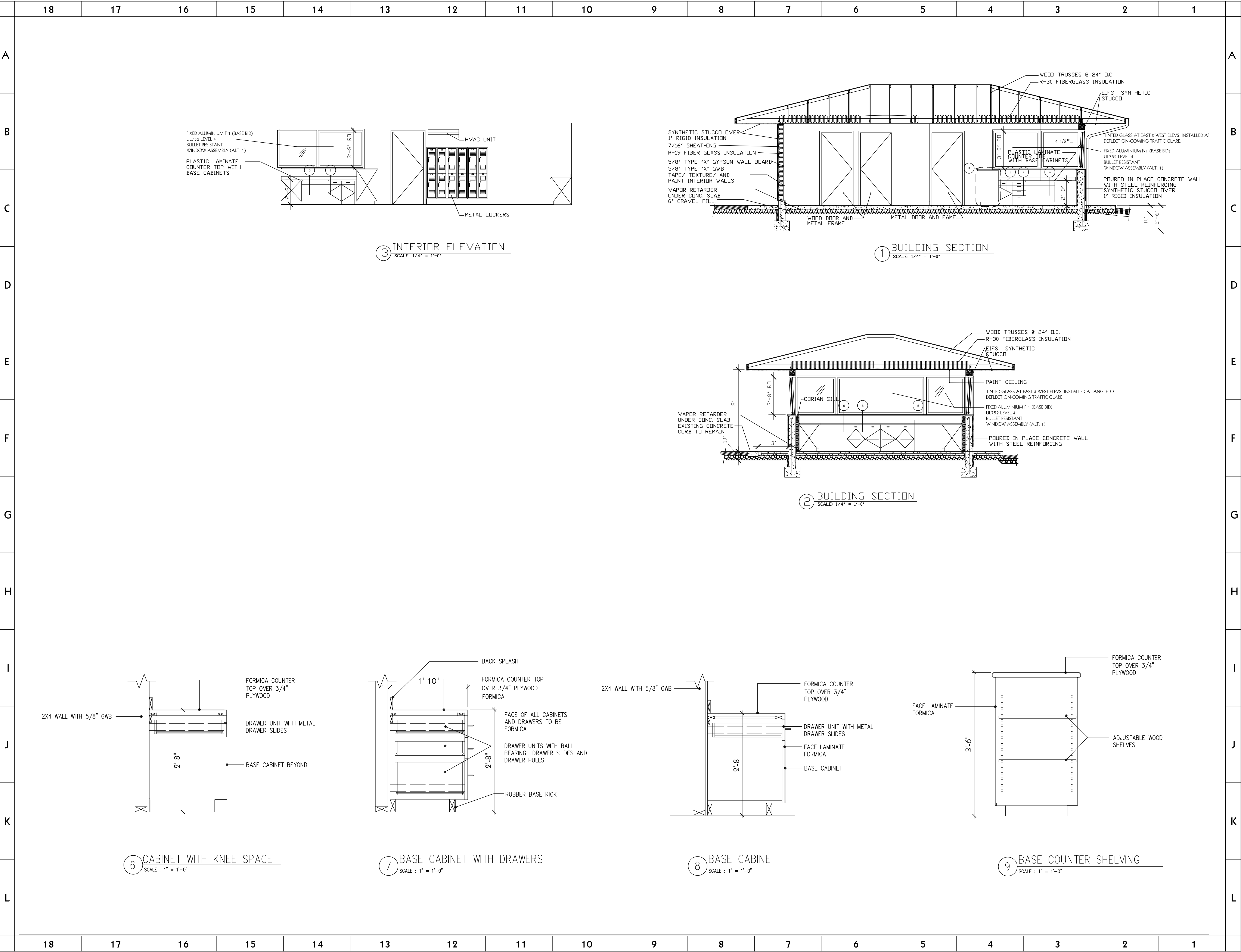
EXTERIOR ELEVATIONS

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PROJECT NO. **06286480** DRAWING NO.

DATE **9-7-06** **AE104**



CONSULTANT INFORMATION

KEYED NOTES

- 01 CHECK ALL FLASHINGS AT THE BASE OF THE COLUMNS AND ALONG GARAGE ROOF FOR DELAMINATION AND HOLES REPAIR AS REQUIRED
- 02 EXISTING BUILT UP ROOF OVER GARAGE AREA TO REMAIN

GENERAL NOTES

01



Utah National Guard

New Guard House
CAMP W.G WILLIAMS, UTAH

SHEET TITLE

SECTIONS & ELEVATIONS

REVISIONS	DATE	BY	DESCRIPTION
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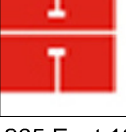
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DATE 9-7-06

AE301

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CONSULTANT INFORMATION

KEYED NOTES



Utah National Guard

New Guard House

CAMP W.G.WILLIAMS,
UTAH

SHEET TITLE

GENERAL
STRUCTURAL NOTES

REVISIONS	DATE	BY	DESCRIPTION
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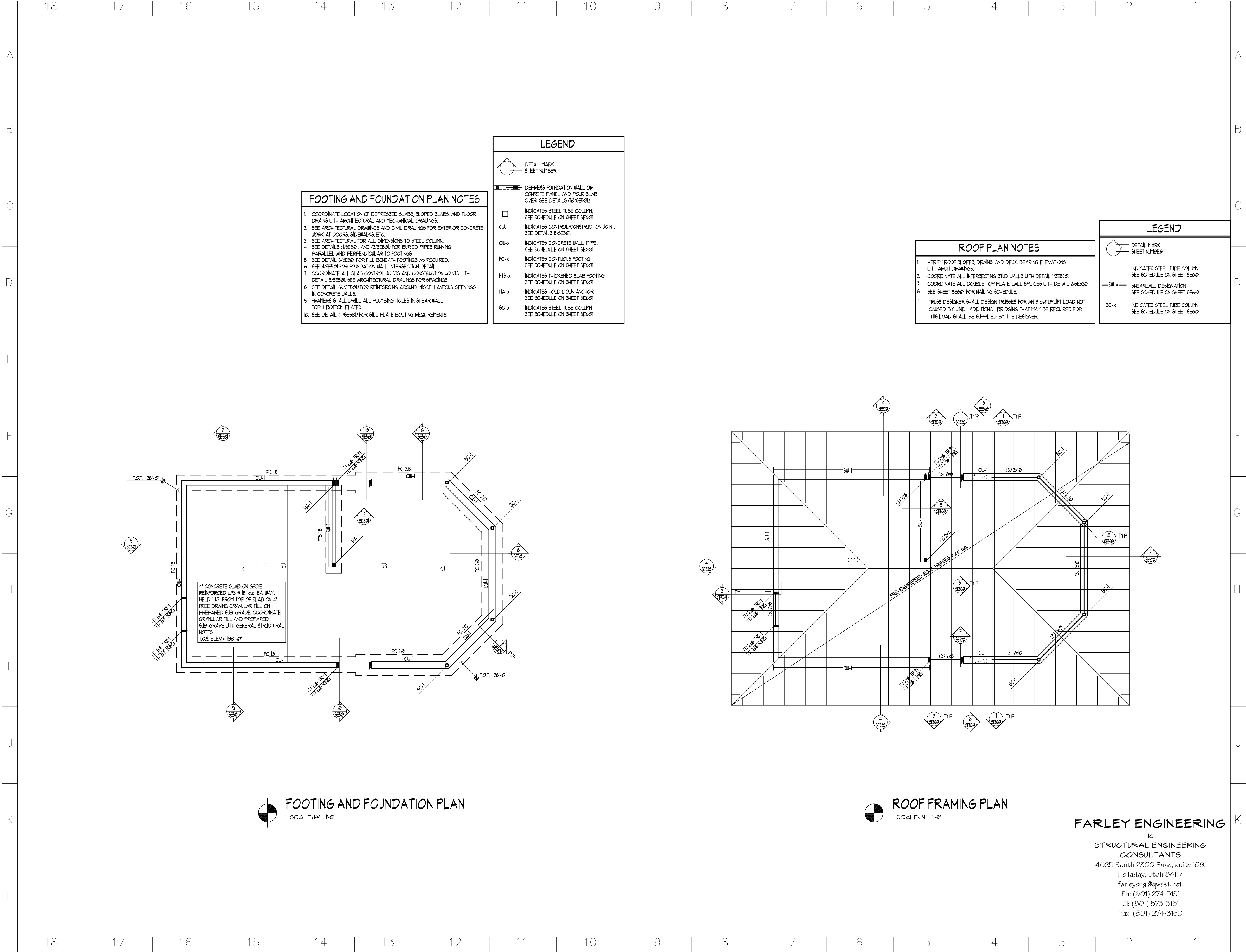
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PROJECT NO.: 06016

DATE: AUG. 18, 2006

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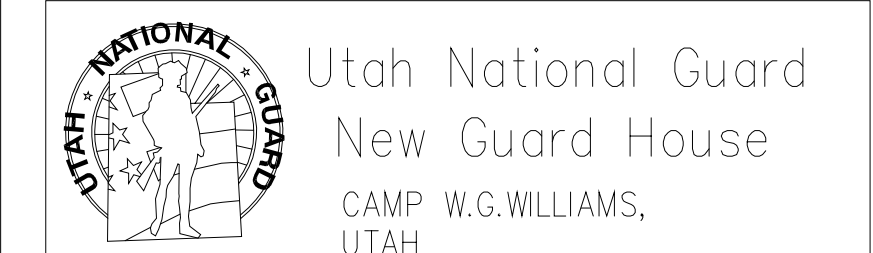




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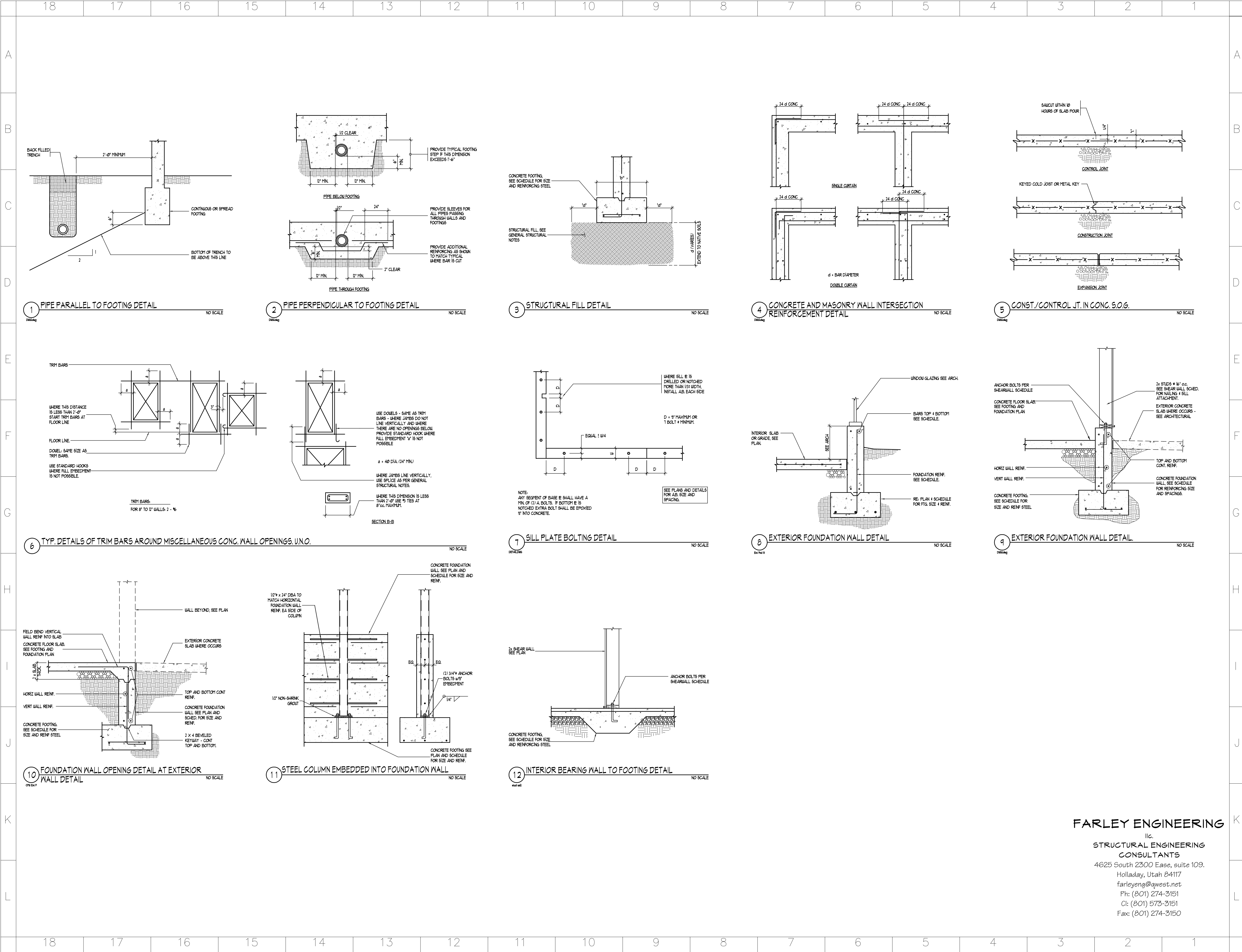
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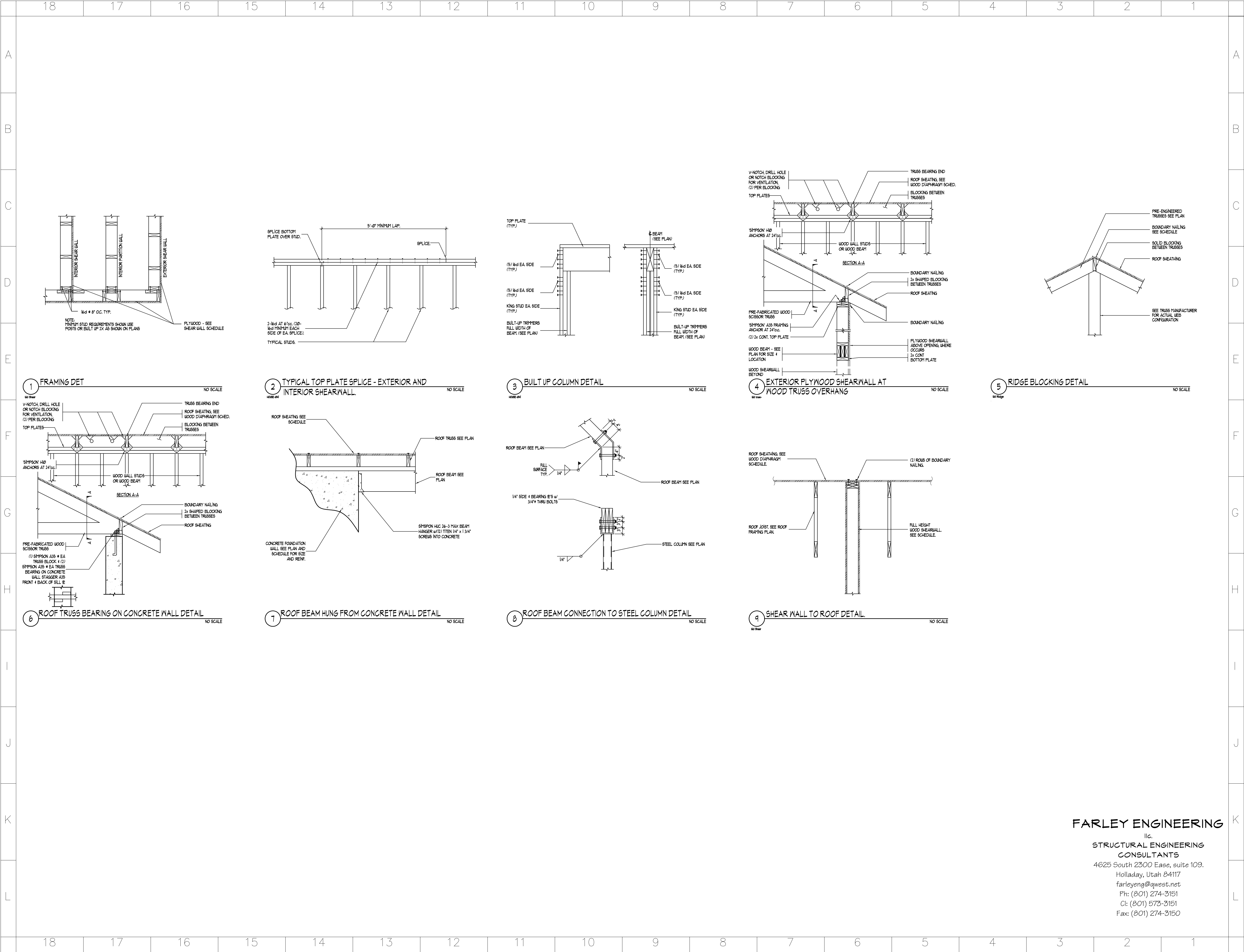


Utah National Guard
New Guard House
CAMP W.G.WILLIAMS,
UTAH

SHEET TITLE		FOOTING AND FOUNDATION AND ROOF FRAMING PLANS	
REVISIONS	DATE	BY	DESCRIPTION
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DATE	AUG. 18, 2006		

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New Guard House
CAMP W.G.WILLIAMS,
UTAH

SHEET TITLE

ROOF FRAMING DETAILS

REVISIONS	DATE	BY	DESCRIPTION
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PROJECT NO.
06016

DRAWING NO.
SE520

DATE
AUG. 18, 2006

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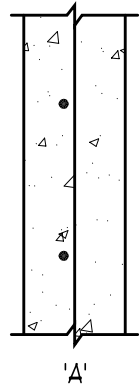
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MARK	WIDTH	LENGTH	THICKNESS	CROSSWISE REINFORCING			LENGTHWISE REINFORCING			REMARKS
				NO.	SIZE	LENGTH SPACE	NO.	SIZE	LENGTH SPACE	
FT9.5	1'-6"	CONT.	12"		NONE REQUIRED		3	#4	CONT.	6"
FC2.0	2'-0"	CONT.	12"		NONE REQUIRED		3	#4	CONT.	9"

- PLACE ALL FOOTING REINFORCING IN BOTTOM OF FOOTING WITH 3" CLEAR CONCRETE COVER UNLESS NOTED OTHERWISE.
- TOP REINFORCING, WHERE SPECIFIED, SHALL BE PLACED IN THE TOP OF THE FOOTING WITH 2" CLEAR CONCRETE COVER.
- THE SCHEDULED FOOTINGS ARE NOT NECESSARILY ALL USED.
- FT9-THICKENED SLAB FOOTING.
FC-CONTINUOUS FOOTING.

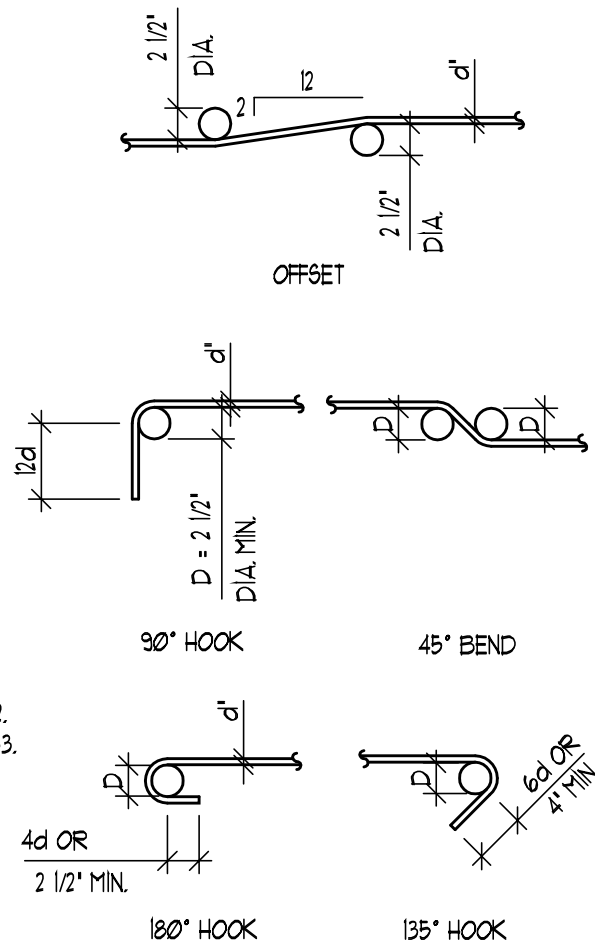
MARK	THICKNESS	f'c psi	REINFORCING			TYPE	COMMENTS
			VERTICAL	HORIZONTAL	TOP AND BOTTOM		
CW-1	8"	3000	#4 AT 16"oc.	#4 AT 12"oc.	(2) #5 x CONT.	A	

NOTES:
1. WALLS OVER 8'-0" IN HEIGHT: DO NOT INSTALL FORMS UNTIL REBAR INSPECTION HAS OCCURED.



BAR SIZE	f'c = 3000 PSI			f'c = 4000 PSI			f'c = 5000 PSI			f'c = 6000 PSI		
	REGULAR CLASS	TOP CLASS	TOP CLASS	REGULAR CLASS	TOP CLASS	TOP CLASS	REGULAR CLASS	TOP CLASS	TOP CLASS	REGULAR CLASS	TOP CLASS	TOP CLASS
	A	B	A	B	A	B	A	B	A	B	A	B
#3	13"	11"	11"	21"	12"	16"	21"	12"	16"	21"	12"	16"
#4	18"	24"	24"	31"	16"	19"	19"	25"	14"	19"	24"	19"
#5	22"	29"	29"	38"	18"	25"	33"	11"	22"	22"	29"	16"
#6	27"	36"	36"	46"	24"	31"	31"	40"	21"	28"	36"	20"
#7	33"	51"	51"	66"	34"	44"	44"	56"	30"	39"	51"	27"
#8	43"	64"	64"	82"	42"	55"	55"	71"	38"	49"	64"	35"
#9	62"	80"	80"	104"	54"	70"	70"	90"	48"	62"	81"	44"
#10	78"	102"	102"	132"	68"	88"	88"	115"	61"	79"	102"	56"
#11	96"	125"	125"	162"	83"	108"	108"	141"	76"	97"	126"	68"

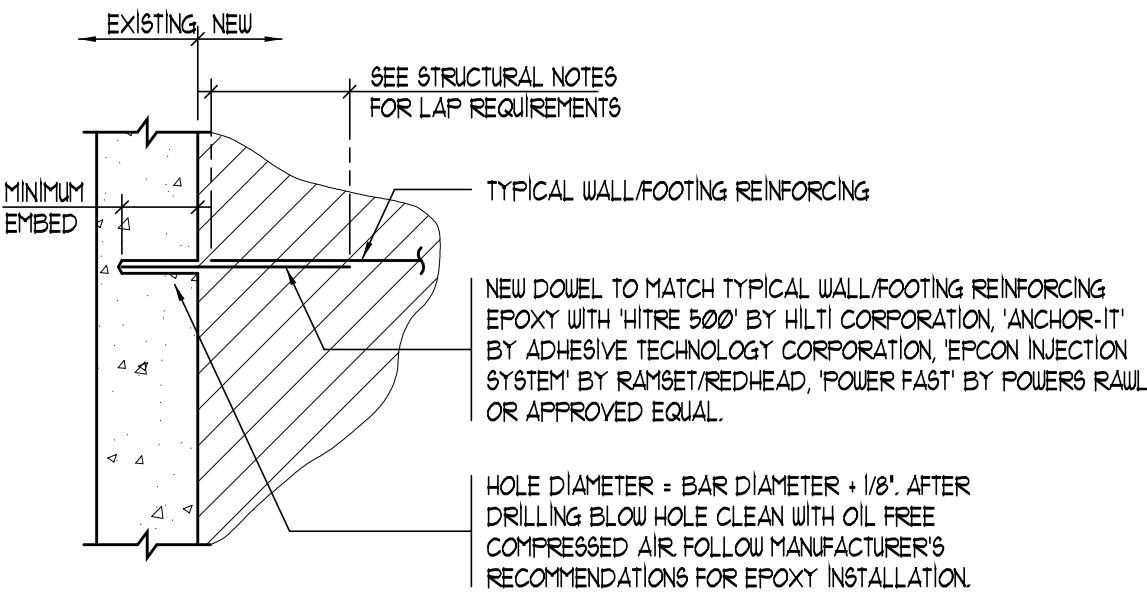
- THESE NOTES SHALL BE USED FOR ALL SPLICES, UNLESS NOTED OTHERWISE.
- CLASS 'A' SPLICES MAY BE USED ONLY IN CASES WHERE 50% OR LESS OF THE BARS ARE SPLICED WITHIN THE LAP SPLICE LENGTH.
- CLASS 'B' SPLICES SHALL BE USED FOR ALL SPLICES UNLESS THE REQUIREMENTS OF NOTE #1 ABOVE ARE MET.
- TIES AND STIRRUPS SHALL NOT BE SPLICED.
- a. FOR BUNDLED BARS OF THREE OR LESS, LAP SPLICE LENGTHS SHALL BE MULTIPLIED BY 12.
b. FOR BUNDLED BARS OF FOUR OR MORE, LAP SPLICE LENGTHS SHALL BE MULTIPLIED BY 133.
c. INDIVIDUAL BAR SPLICES WITHIN A BUNDLE SHALL NOT OVERLAP.
d. ENTIRE BUNDLES SHALL NOT BE LAP SPLICED.
- FOR ALL LIGHTWEIGHT CONCRETE, LAP LENGTHS SHALL BE MULTIPLIED BY 13.
- FOR ALL EPOXY COATED BARS, LAP LENGTHS SHALL BE MULTIPLIED BY 13 FOR TOP BARS AND 15 FOR REGULAR BARS.
- TOP BARS ARE CLASSIFIED AS HORIZONTAL BARS WHERE 12" OR MORE, OF FRESH CONCRETE IS CAST BELOW THE REINFORCING BAR.



1 CONCRETE FOOTING SCHEDULE

NO SCALE

DOUCEL SIZE	MINIMUM EMBEDMENT INTO EXISTING CONCRETE
#4	6 1/2"
#5	7 1/2"
#6	10"
#7	1'-1"
#8	1'-4"

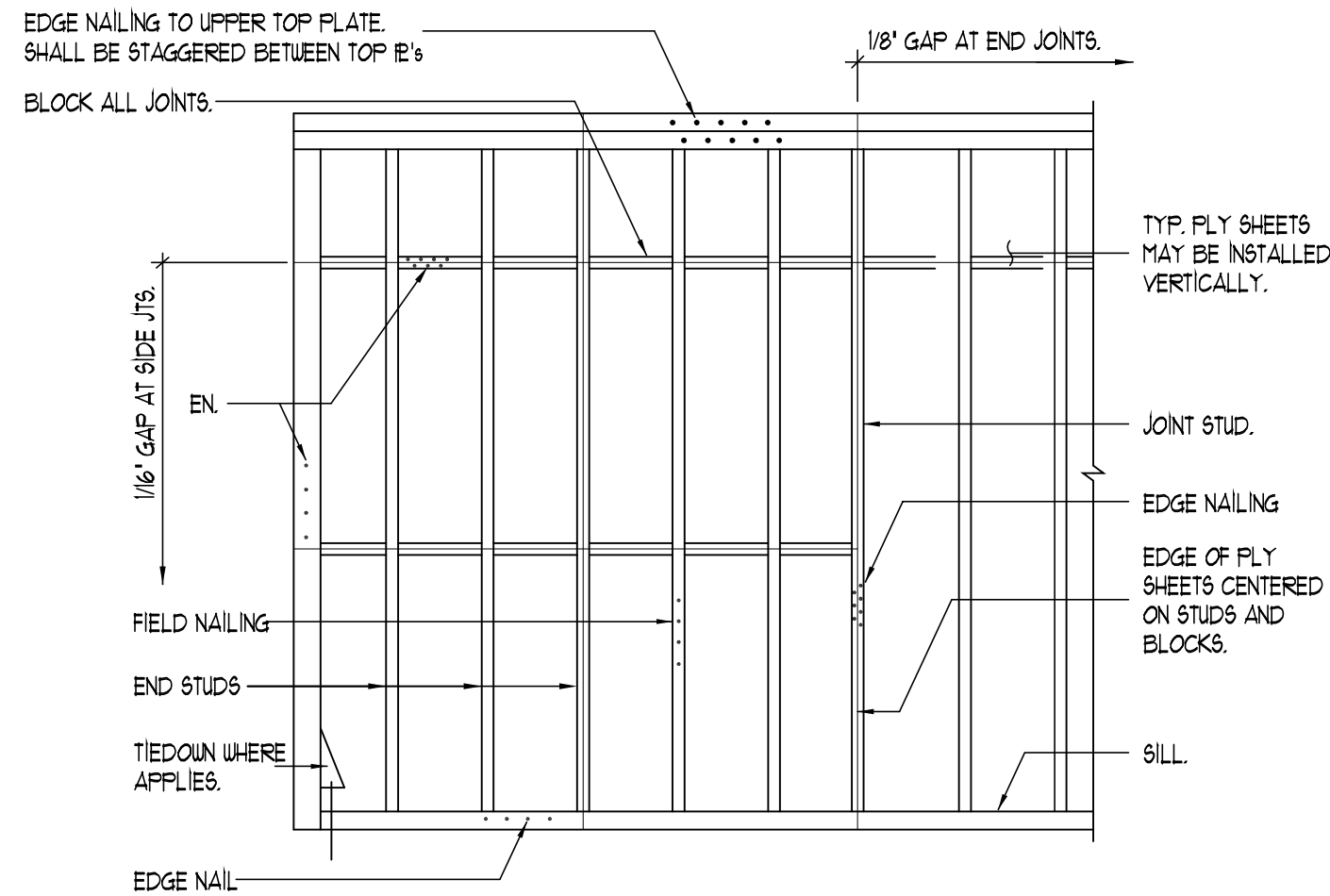


4 EPOXY DOWEL EMBEDMENT SCHEDULE

NO SCALE

MARK	PLYWOOD	NAIL SIZE	EDGE NAIL (EN)	FIELD NAIL (FN)	SILL NAILING TO WOOD	SILL BOLTING TO CONCRETE	* SIDE
SW-1	1/4" PLYWOOD / OSB	8d	4" oc.	12" oc.	--	3/4" x 12" @ 32" oc.	1

- NOTES:
- MIN. NAIL PENETRATION INTO FRAMING, 8d-1 1/2", 10d-1 5/8".
 - USE COMMON NAILS.
 - USE 3/16" x 2" x 2" SQUARE PLATE WASHERS AT ALL SHEAR WALL ANCHOR BOLTS.

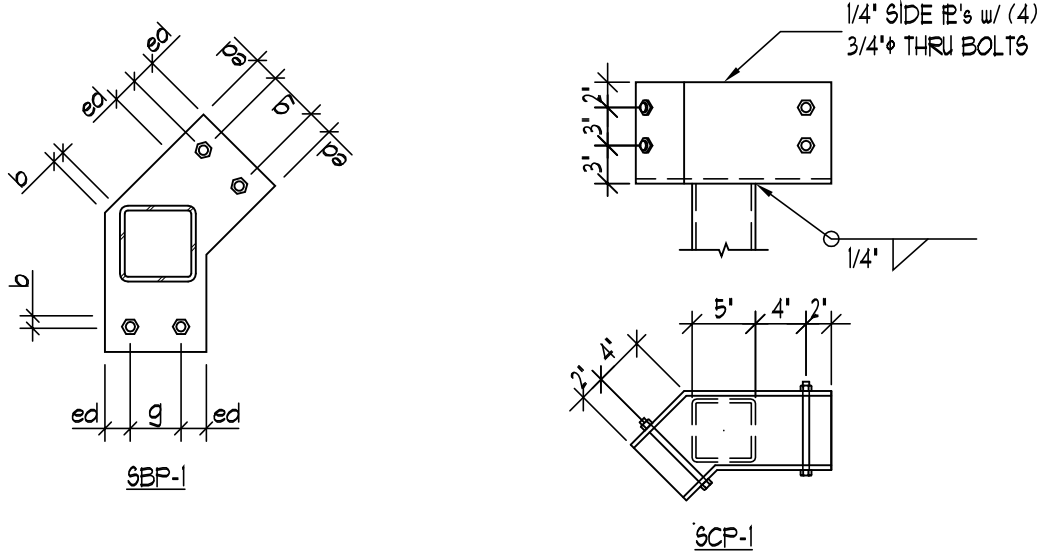


7 SHEARWALL SCHEDULE

NO SCALE

MARK	COLUMN SIZE	STEEL BASE PLATE	STEEL CAP PLATE	COMMENTS
SC-1	T9 3x3x1/4"	3/4" SBP-1	1/4" SCP-1	

- SEE 'GENERAL STRUCTURAL NOTES' (G6N) FOR GRADES AND OTHER SPECIFICATIONS.
- ALL ANCHOR BOLTS SHALL BE 3/4" x 12" 1/4" BOLTS WITH A MINIMUM OF A 9" EMBEDMENT & 3" PROJECTION. ANY HOLES LARGER THAN 5/16" SHALL HAVE 5/16" PLATE WASHER INSTALLED BETWEEN THE MEMBER AND THE HARDENED WASHERS. DO NOT WELD ANY ANCHOR BOLTS. THIS INCLUDES TACK WELDING. THE ANCHOR BOLTS SPECIFIED IN THIS NOTE ARE TYPICAL UNLESS NOTED OTHERWISE.
- ALL CAP PLATE BOLTS ARE TO BE 3/4" A-325N BOLTS UNLESS NOTED OTHERWISE.
- SEE DETAIL 1115E601 FOR STEEL COLUMNS EMBEDDED IN CONCRETE WALLS.



BASE PLATE DIMENSIONS
g = BEAM GAUGE OR 3" MIN.
ed = EDGE DISTANCE 1 1/2" MIN.
b = 1/2" MIN.
eq = EQUALLY SPACED.

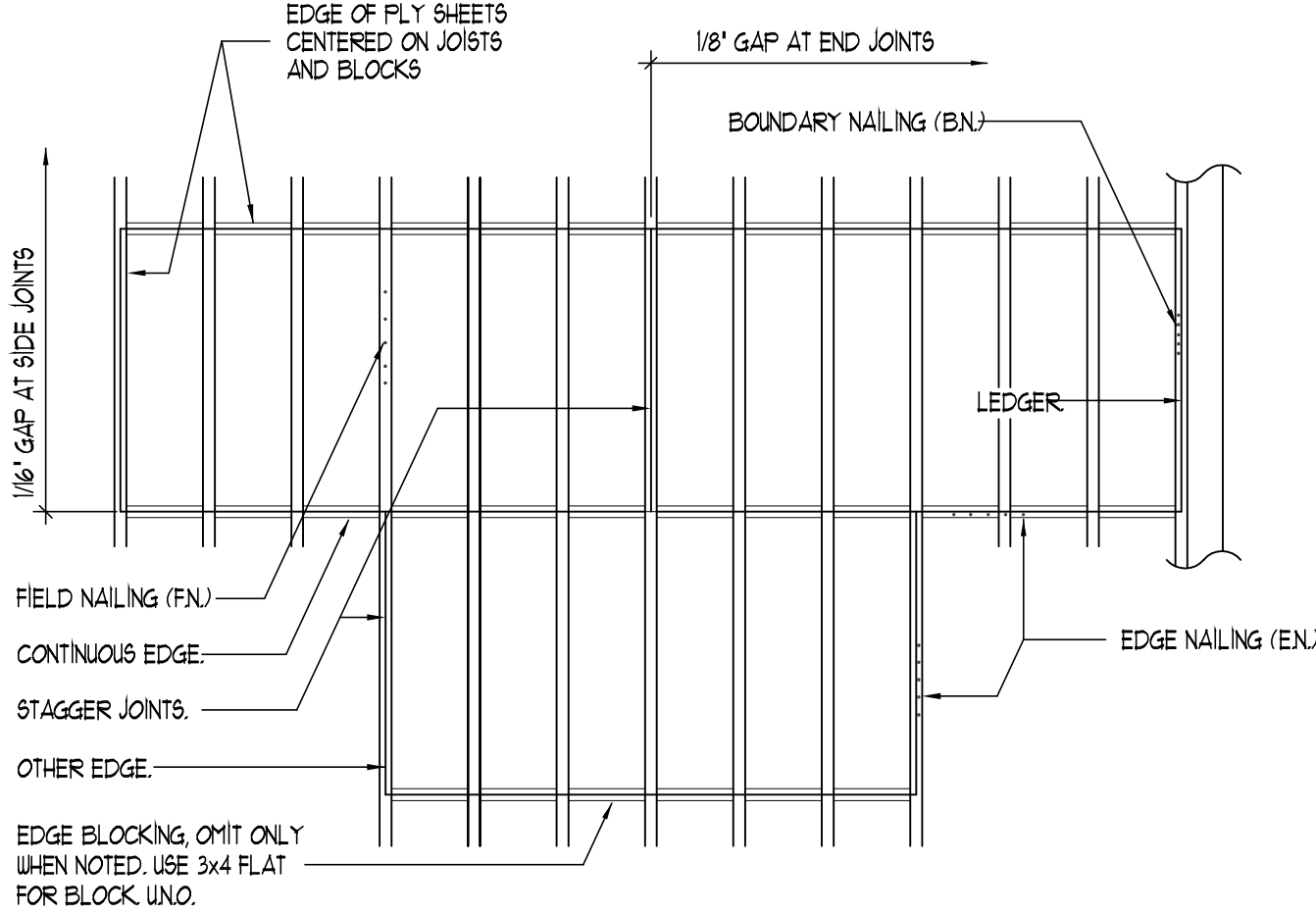
CAP PLATE DIMENSIONS
g = BEAM GAUGE OR 3" MIN.
ed = EDGE DISTANCE 1 1/2" MIN.
b = 1/2" MIN.
eq = EQUALLY SPACED.
w = BEAM WIDTH 1/4" MIN. OR COLUMN WIDTH 1" WHICHEVER IS GREATER.

5 STEEL COLUMN SCHEDULE

NO SCALE

LOCATION	PLYWOOD	NAIL SIZE	EDGE NAIL	FIELD NAIL	BOUNDARY NAIL	EDGE BLOCK
ROOF	1/4" OSB	8d	4" oc.	12" oc.	4" oc.	NO

- NOTES:
- MIN. NAIL PENETRATION INTO FRAMING 8d-1 1/2", 10d-1 5/8".
 - USE SCREW SHANK NAILS AT FLOOR PLYWOOD.
 - USE COMMON NAILS.



8 DIAPHRAGM SCHEDULE

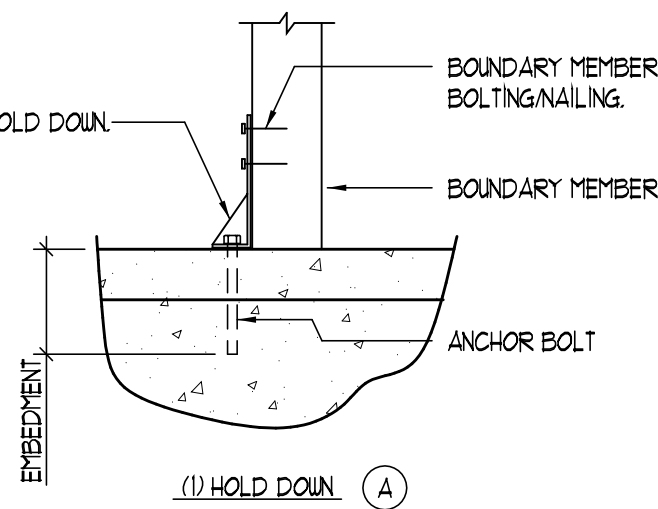
NO SCALE

3 CONCRETE REBAR LAP SPLICE SCHEDULE

NO SCALE

MARK	HOLD DOWN	BOUNDARY MEMBER SIZE	BOUNDARY MEMBER BOLTING / NAILING	ANCHOR BOLT	EMBEDMENT	DETAIL	NOTES
HA-1	HDU4	(2) 2x6	(10) SD5 1/4 x 2 1/2 WOOD SCREWS	5/8"	6"	A	

- NOTES:
1. EMBED BOLTS SHALL HAVE 3/16" x 3" x 3" PLATE WASHERS WITH A DOUBLE NUT AT THE DEPTH OF EMBEDMENT INDICATED.



6 HOLD DOWN ANCHOR SCHEDULE.

NO SCALE

CONNECTION	NAILING
SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL	1ed at 16" oc.
TOP PLATE TO STUD, END NAIL	2-1ed
STUD TO SOLE PLATE, END NAIL	2-1ed
DOUBLE STUDS, FACE NAIL	1ed at 12" oc.
DOUBLED TOP PLATES, FACE NAIL	1ed at 12" oc.
TOP PLATES, LAPS & INTERSECTION, FACE NAIL	2-1ed
CONTINUOUS HEADER, TWO PIECES	1ed at 12" oc. along ea edge
CEILING JOISTS TO PLATE, TOENAIL	3-8d
CONTINUOUS HEADER TO STUD, TOENAIL	4-8d
CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	3-1ed
CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	3-1ed
RAFTER TO PLATE, TOENAIL	3-8d
1" BRACE TO EACH STUD & PLATE, FACE NAIL	2-8d
BUILT-UP CORNER STUDS	1ed at 12" oc.
BUILT-UP GIRDER & BEAMS	1ed at 12" oc. at top & bottom staggered 2-1ed at ends & at ea splice
* PLYWOOD & PARTICLEBOARD: SUPERFLOOR ROOF & WALL SHEATHING (TO FRAMING)	
12" AND LESS	8d
19/32" - 3/4"	8d or 10d
7/8" - 1"	8d
1-1/8" - 1-1/4"	10d or 8d
COMBINATION SUPERFLOOR-UNDERLAYMENT (TO FRAMING)	
3/4" AND LESS	6d
7/8" - 1"	8d
1-1/8" - 1-1/4"	10d or 8d
* NAILS SPACED AT 6 INCHES ON CENTER AT EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS, EXCEPT 6 INCHES AT ALL SUPPORTS WHERE SPANS ARE 48 INCHES OR MORE. FOR NAILING OF DIAPHRAGMS AND SHEAR WALLS, REFER TO SHEAR WALL SCHEDULE.	

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CONSULTANT
INFORMATION

KEYED NOTES



Utah National Guard
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CAMP W.G.WILLIAMS,
UTAH

SHEET NO.	TITLE	REVISIONS	DATE	BY	DESCRIPTION
1	STRUCTURAL SCHEDULES				
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PROJECT NO.	06016	CHECKED BY	DMF
DATE	AUG. 18, 2006	DRAWING NO.	SE601

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ABBREVIATIONS			
NOTE: ALL ABBREVIATIONS MAY NOT BE USED			
AD	ACCESS DOOR	MCA	MINIMUM CIRCUIT AMPS
AIR	AIR CONDITION(−ING,−ED)	MFR	MANUFACTURER
COND		MIN	MINIMUM
APD		N/A	NOT APPLICABLE
BD	AIR PRESSURE DROP	NC	NORMALLY CLOSED
BHP	BRAKE HORSE POWER	NC	NOISE CRITERIA
BTU	BRITISH THERMAL UNIT	NIC	NOT IN CONTRACT
BTUH	BTU/HOUR	NO	NORMALLY OPEN
CFH	CUBIC FEET PER HOUR	NPSH	NET POSITIVE SUCTION
CFM	CUBIC FEET PER MINUTE		
CLG	COOLING	NTS	NOT TO SCALE
COMP	COMPONENT	OA	OUTSIDE AIR
COND	CONDENS(−ER, −ING, −ATION)	OD	OUTSIDE DIAMETER
CV	CONTROL VALVE	OZ	OUNCE
CW	COLD WATER	PD	PRESSURE DROP OR DIFFERENCE
DIA	DIAMETER	PG	PROPYLENE GLYCOL
DISCH	DISCHARGE	PH	PHASE
DP	DEPTH OR DEEP	PPM	PARTS PER MILLION
DB	DRY BULB TEMPERATURE	PRESS	PRESSURE
(E)	EXISTING	PSF	POUNDS PER SQUARE FOOT
EER	ENERGY EFFICIENCY RATIO	PSI	POUNDS PER SQUARE INCH
EFF	EFFICIENCY	PSIA	PSI ABSOLUTE
EG	ETHYLENE GLYCOL	PSIG	PSI GAUGE
ELEC	ELECTRIC	R	THERMAL RESISTANCE
ELEV	ELEVATION	RA	RETURN AIR
ENT	ENTERING	RECIRC	RECIRCULATE
EVAP	EVAPORAT(−E, −ING, −ED, −OR)	REFR	REFRIGERATION
EWT	ENTERING WATER TEMPERATURE	REQD	REQUIRED
EXT	EXTERNAL	RLA	RATED −−− AMPS
(F)	FUTURE	RPM	REVOLUTIONS PER MINUTE
F	FAHRENHEIT	RW	RAINWATER
FC	FLEXIBLE CONNECT(−OR, −ION)	SA	SUPPLY AIR
FD	FIRE DAMPER	SC	SHADING COEFFICIENT
FLA	FULL LOAD AMPS	SCFM	STANDARD CUBIC FEET PER MINUTE
FPI	FINS PER INCH	SCW	SOFT COLD WATER
FPM	FEET PER MINUTE	SF	SAFETY FACTOR
FPS	FEET PER SECOND	SH	SENSIBLE HEAT
FSD	FIRE SMOKE DAMPER	SL	SEA LEVEL
FT	FEET	SP	STATIC PRESSURE
GAL	GALLON(S)	SPECS(S)	SPECIFICATION(S)
GPH	GALLONS PER HOUR	SQ	SQUARE
GPM	GALLONS PER MINUTE	STD	STANDARD
HD	HEAD	STM	STEAM
HG	MERCURY	TEMP	TEMPERATURE
HR	HOUR	TD	TEMP. DROP OR DIFF. THERMAL
HT	HEIGHT	TOT	TOTAL
HTG	HEATING	TSTAT	THERMOSTAT
HP	HORSE POWER	V	VOLT
HW	HOT WATER	VAC	VACUUM
HZ	HERTZ(FREQUENCY)	VAV	VARIABLE AIR VOLUME
ID	INSIDE DIAMETER	VEL	VELOCITY
IN	INCH	VENT	VENT. VENTILATION
KW	KILOWATT	VERT	VERTICAL
LAT	LEAVING AIR TEMPERATURE	VFD	VARIABLE FREQUENCY DRIVE
LBS	POUNDS	VOL	VOLUME
LG	LENGTH	WC	WATER COLUMN
LH	LATENT HEAT	WG	WATER GAUGE
LRA	LOOKED ROTOR AMPS	WPD	WATER PRESSURE DROP
LVG	LEAVING	WTR	WATER
LWT	LEAVING WATER TEMPERATURE	WT	WEIGHT
MAX	MAXIMUM	WB	WET BULB TEMP
MBH	THOUSAND BTU PER HOUR	YR	YEAR

SYMBOL LEGEND		
SYMBOL	DESCRIPTION	
DUCTWORK		
SINGLE LINE	DOUBLE LINE	DESCRIPTION
		RECTANGULAR EXHAUST DUCT DOWN
		EXHAUST GRILLE
VALVES, METERS, AND GAUGES		
	SHUT OFF VALVE	
	90° ELBOW UP	
	90° ELBOW DOWN	
	90° TEE UP	
	90° TEE DOWN	
	UNION	
PLUMBING SYMBOLS		
C.B.	CATCH BASIN	
M.H.	MANHOLE	
W.H.	WALL HYDRANT	
H.B.	HOSE BIBB	
	CLEANOUT TO GRADE	
	FLOOR CLEANOUT	
	WALL CLEANOUT	
PLUMBING PIPING		
	SOIL, WASTE - ABOVE GRADE	
	SOIL, WASTE - BELOW GRADE	
	VENT	
	COLD WATER	
	HOT WATER	
VTR	VENT THRU ROOF	
	SANITARY SEWER	

MECHANICAL SHEET INDEX	
SHEET NO	SHEET TITLE
M−001	MECHANICAL COVER SHEET
M−103	MECHANICAL PLAN
M−501	MECHANICAL DETAILS


SYMBOL LEGEND	
SYMBOL	DESCRIPTION
REFERENCE AND LINE SYMBOLS	
	DETAIL INDICATOR: # INDICATES DETAIL NUMBER, SHEET INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN.
	ELEVATION OR SECTION INDICATOR, EXTERIOR: # INDICATES ELEVATION OR SECTION NUMBER, SHEET INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
	ELEVATION OR SECTION INDICATOR, INTERIOR: # INDICATES ELEVATION OR SECTION NUMBER, SHEET INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
	ROOM OR SPACE NUMBER.
	KEYNOTE INDICATOR.
	REVISION INDICATOR.
	EQUIPMENT INDICATOR.
	PLUMBING FIXTURE INDICATOR.
	BREAK, STRAIGHT
	BREAK, ROUND.
	HIDDEN FEATURES LINE: HIDDEN, THIN LINE.
	CONTRACT LIMIT LINE: DASHDOT, WIDE LINE.



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GENERAL MECHANICAL NOTES

- DO NOT ROUTE DUCTS AND PIPES ABOVE ELECTRICAL PANELS. ALL ELECTRICAL PANELS MUST HAVE CLEAR ACCESS SPACE IN FRONT OF PANEL 4'-0" DEEP AND 6'-6" HIGH. DO NOT ROUTE DUCTS AND PIPES IN ELECTRICAL ROOMS, EXCEPT DUCTS AND PIPES SERVING THE ROOM.
- COORDINATE EXACT LOCATIONS OF CEILING DIFFUSERS AND GRILLES WITH ARCHITECTURAL REFLECTED CEILING PLAN.
- ALL DUCT DIMENSIONS ARE INSIDE FREE AREA DIMENSIONS. ADJUST SHEET METAL DIMENSION FOR LINED DUCT.
- IF CONTRACTOR ENCOUNTERS MATERIAL WHICH MAY CONTAIN ASBESTOS IMMEDIATELY STOP WORK IN THIS AREA AND NOTIFY THE OWNER.
- PROVIDE CEILING ACCESS PANELS AS REQUIRED WHERE MECHANICAL EQUIPMENT, VALVES, VAV BOXES, FIRE DAMPERS, ETC. ARE LOCATED ABOVE INACCESSIBLE CEILINGS.
- STEEL ROOF DECK SHALL NOT BE USED TO SUPPORT LOADS FROM PIPING, DUCTWORK OR EQUIPMENT, UNLESS NOTED OTHERWISE. HANGER LOADS LESS THAN 50 LBS. MAY BE HUNG FROM THE STEEL ROOF DECK IN CASES WHEN HANGING FROM THE STEEL ROOF DECK CANNOT BE AVOIDED; THE ATTACHMENT METHOD MUST DISTRIBUTE THE LOAD ACROSS THE DECK AS APPROVED BY THE STRUCTURAL ENGINEER.
- PROVIDE AND INSTALL CARRIERS AS REQUIRED FOR FLOOR AND WALL MOUNTED PLUMBING FIXTURES. INSTALL ALL FIXTURES WITH ACCESSORIES AS REQUIRED TO PROVIDE A COMPLETE, WORKABLE INSTALLATION.
- PLUMBING FIXTURES SHALL INCLUDE COMPRESSION STOPS ABOVE FLOOR IN SUPPLIES TO ALL FIXTURES AND A MINIMUM 17 GAUGE P−TRAP
- ALL LAVATORIES AND HAND SINKS WILL HAVE A COMBINATION FAUCET OR PREMIXING FAUCET CAPABLE OF SUPPLYING WARM WATER FOR A MINIMUM OF 10 SECONDS.
- FLOOR DRAINS ARE SHOWN IN THE APPROXIMATE LOCATION. COORDINATE FINAL LOCATION WITH EQUIPMENT AND DRAINAGE REQUIREMENTS. PROVIDE BLOCKOUTS AS NECESSARY.
- PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO CONSTRUCT A COMPLETE, OPERATIONAL PLUMBING SYSTEM FOR THE ENTIRE PROJECT AS SHOWN ON THESE DRAWINGS, INCLUDING ALL NECESSARY FEES AND PERMITS.
- THE ENTIRE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE MOST RECENTLY ADOPTED BUILDING CODE, MECHANICAL CODE, PLUMBING CODE, ELECTRICAL CODE, AND ALL OTHER APPLICABLE CITY, COUNTY, SCHOOL DISTRICT, STATE, AND FEDERAL CODES AND REGULATIONS IN EFFECT AT THE DATE OF THE BID. CONFORM TO ANY CODES, RULES, REGULATIONS AND REQUIREMENTS THAT THE PROJECT OWNER HAS.
- THE DRAWINGS AND SPECIFICATIONS HAVE BEEN PREPARED TO SUPPLEMENT EACH OTHER AND THEY SHALL BE INTERPRETED AS AN INTEGRAL UNIT WITH THE ITEMS SHOWN ON ONE AND NOT THE OTHER BEING FURNISHED AND INSTALLED AS THOUGH SHOWN AND CALLED OUT IN BOTH.



Utah National Guard
New Guard House
CAMP W.G.WILLIAMS, UTAH

SHEET TITLE

Mechanical Cover Sheet

REVISIONS	DATE	BY	DESCRIPTION

DRAWN BY

PSS

CHECKED BY

DLA

PROJECT NO

06286480

DRAWING NO

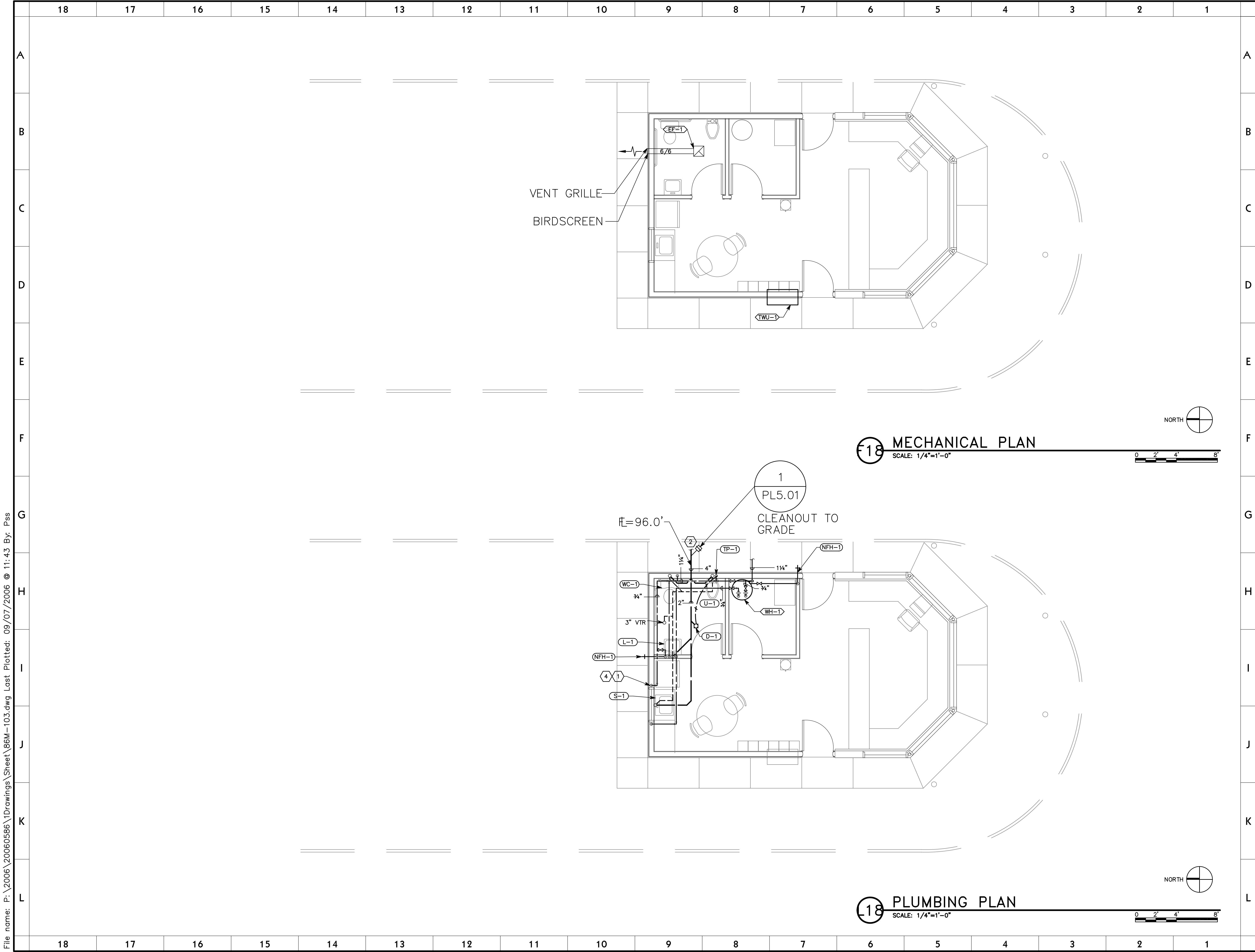
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2006-09-07

M-001

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SHEET KEYNOTES

1. RUN PIPING TIGHT TO INTERIOR SIDE OF 2X6 FRAMED WALL. PROVIDE BATT INSULATION BETWEEN PIPES AND EXTERIOR WALL. IN ADDITION TO PIPE INSULATION. TYPICAL.
2. SEE SITE PLAN FOR CONTINUATION.
3. PRESSURE FLUCTUATION TYPE TRAP PRIMER.
4. DROP PIPES TO SINK IN WALL, TURN UNDER WINDOW, AND ENTER CABINET UNDER SINK.

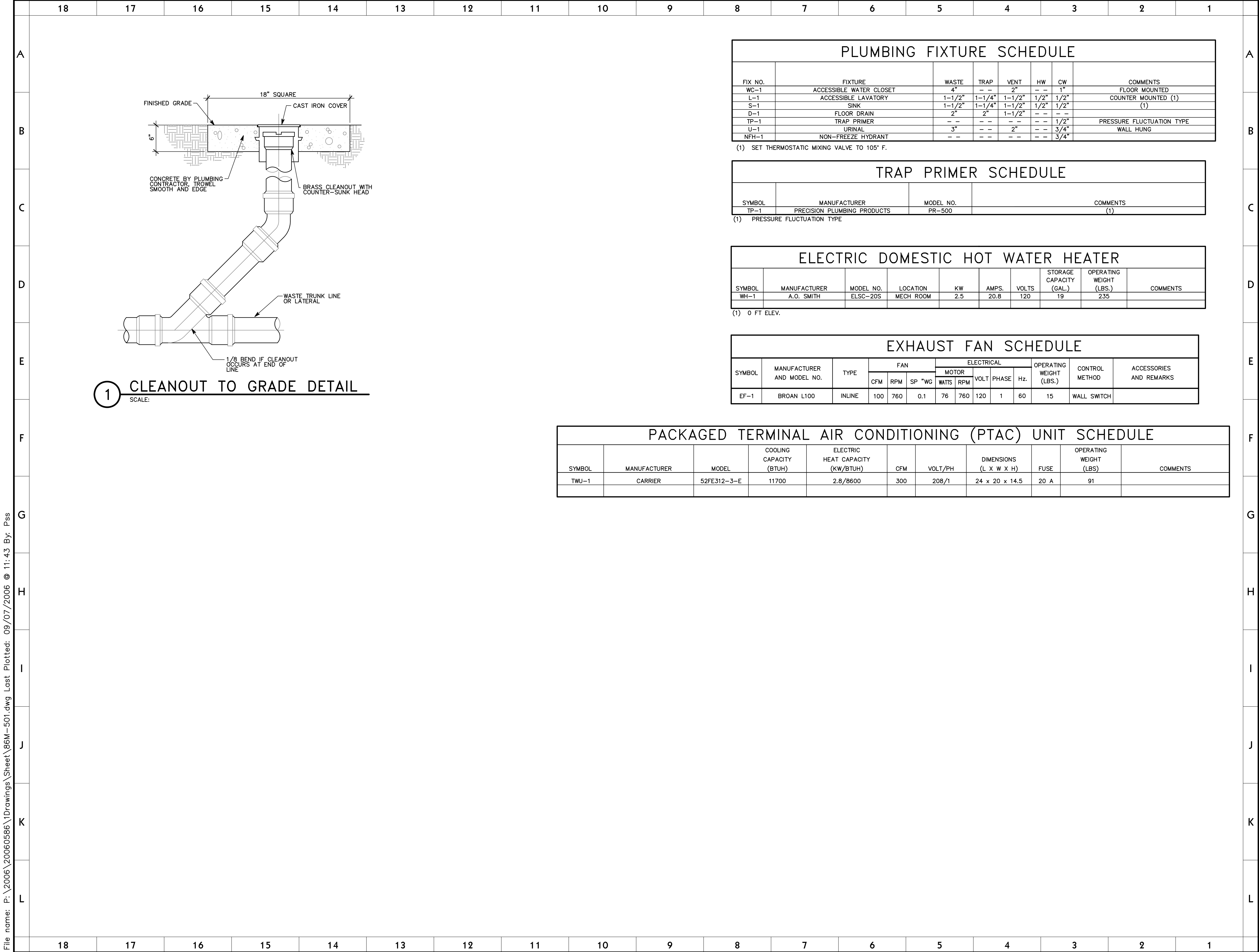


SHEET TITLE

Mechanical Plans

REVISIONS	DATE	BY	DESCRIPTION
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DRAWN BY		PSS	CHECKED BY DLA
PROJECT NO.		06286480	DRAWING NO.
DATE		2006-09-07	M-103

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PLUMBING FIXTURE SCHEDULE							
FIX NO.	FIXTURE	WASTE	TRAP	VENT	HW	CW	COMMENTS
WC-1	ACCESSIBLE WATER CLOSET	4"	-	2"	-	1"	FLOOR MOUNTED
L-1	ACCESSIBLE LAVATORY	1-1/2"	1-1/4"	1-1/2"	1/2"	1/2"	COUNTER MOUNTED (1)
S-1	SINK	1-1/2"	1-1/4"	1-1/2"	1/2"	1/2"	(1)
D-1	FLOOR DRAIN	2"	2"	1-1/2"	-	-	PRESSURE FLUCTUATION TYPE
TP-1	TRAP PRIMER	-	-	-	-	1/2"	WALL HUNG
U-1	URINAL	3"	-	2"	-	3/4"	
NFH-1	NON-FREEZE HYDRANT	-	-	-	-	3/4"	

(1) SET THERMOSTATIC MIXING VALVE TO 105° F.

TRAP PRIMER SCHEDULE			
SYMBOL	MANUFACTURER	MODEL NO.	COMMENTS
TP-1	PRECISION PLUMBING PRODUCTS	PR-500	(1)

(1) PRESSURE FLUCTUATION TYPE

ELECTRIC DOMESTIC HOT WATER HEATER									
SYMBOL	MANUFACTURER	MODEL NO.	LOCATION	KW	AMPS.	VOLTS	STORAGE CAPACITY (GAL.)	OPERATING WEIGHT (LBS.)	COMMENTS
WH-1	A.O. SMITH	ELSC-20S	MECH ROOM	2.5	20.8	120	19	235	

(1) 0 FT ELEV.

EXHAUST FAN SCHEDULE												
SYMBOL	MANUFACTURER AND MODEL NO.	TYPE	FAN			ELECTRICAL				OPERATING WEIGHT (LBS.)	CONTROL METHOD	ACCESSORIES AND REMARKS
			CFM	RPM	SP "WG	WATTS	RPM	VOLT	PHASE			
EF-1	BROAN L100	INLINE	100	760	0.1	76	760	120	1	60	15	WALL SWITCH

PACKAGED TERMINAL AIR CONDITIONING (PTAC) UNIT SCHEDULE										
SYMBOL	MANUFACTURER	MODEL	COOLING CAPACITY (BTUH)	ELECTRIC HEAT CAPACITY (KW/BTUH)	CFM	VOLT/PH	DIMENSIONS (L X W X H)	FUSE	OPERATING WEIGHT (LBS)	COMMENTS
TWU-1	CARRIER	52FE312-3-E	11700	2.8/8600	300	208/1	24 x 20 x 14.5	20 A	91	



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SHEET TITLE			
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06286480		M-501	
DATE			
2006-09-07			

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THROW</div><div>LTG</div><div>LIGHTING</div></div><div><div>4W</div><div>FOUR-WIRE</div><div>LV</div><div>LOW VOLTAGE</div></div><div><div>4WAY</div><div>FOUR-WAY</div><div>MATV</div><div>MASTER ANTENNA TELEVISION SYSTEM</div></div><div><div>A</div><div>ABOVE COUNTER</div><div>MAX</div><div>MAXIMUM</div></div><div><div>AC</div><div>ARMORED CABLE</div><div>MC</div><div>METAL CLAD</div></div><div><div>ADA</div><div>AMERICANS WITH DISABILITIES ACT</div><div>MCA</div><div>MINIMUM CIRCUIT AMPS</div></div><div><div>ADJ</div><div>ADJACENT</div><div>MCB</div><div>MAIN CIRCUIT BREAKER</div></div><div><div>AFF</div><div>ABOVE FINISHED FLOOR</div><div>MCC</div><div>MOTOR CONTROL CENTER</div></div><div><div>AFG</div><div>ABOVE FINISHED GRADE</div><div>MCP</div><div>MOTOR CIRCUIT PROTECTION</div></div><div><div>AIC</div><div>AMPERE INTERRUPTING CAPACITY</div><div>MDP</div><div>MAIN DISTRIBUTION PANEL</div></div><div><div>ALUM</div><div>ALUMINUM</div><div>MG</div><div>MOTOR GENERATOR</div></div><div><div>AMP</div><div>AMPERE</div><div>MH</div><div>MANHOLE</div></div><div><div>ANN</div><div>ANNUNCIATOR</div><div>MIN</div><div>MINIMUM</div></div><div><div>AN</div><div>ACCESS POINT (WIRELESS DATA)</div><div>MLO</div><div>MAIN LUGS ONLY</div></div><div><div>AR</div><div>AS REQUIRED</div><div>MOCP</div><div>MAXIMUM OVERCURRENT PROTECTION</div></div><div><div>ASC</div><div>AMPS SHORT CIRCUIT SWITCH</div><div>NA</div><div>NOT APPLICABLE</div></div><div><div>ATS</div><div>AUTOMATIC TRANSFER SWITCH</div><div>NC</div><div>NORMALLY CLOSED</div></div><div><div>AV</div><div>AUDIO VISUAL</div><div>NEC</div><div>NATIONAL ELECTRICAL CODE</div></div><div><div>AWG</div><div>AMERICAN WIRE GAGE</div><div>NEMA</div><div>NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION</div></div><div><div>BB XFMR</div><div>BUCK-BOOST TRANSFORMER</div><div>NFC</div><div>NATIONAL FIRE CODE</div></div><div><div>C</div><div>CEILING MOUNTED</div><div>NFPA</div><div>NATIONAL FIRE PROTECTION 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DOOR</div></div><div><div>CO</div><div>CONVENIENCE OUTLET</div><div>OL</div><div>OVERLOAD</div></div><div><div>COR</div><div>CONTRACTING OFFICER'S REPRESENTATIVE</div><div>PS</div><div>PUSHBUTTON</div></div><div><div>CP</div><div>CONTROL PANEL</div><div>PF</div><div>POWER FACTOR</div></div><div><div>CT</div><div>CURRENT TRANSFORMER</div><div>PH</div><div>PHASE</div></div><div><div>CTV</div><div>CABLE TELEVISION</div><div>PNL</div><div>PANEL</div></div><div><div>CU</div><div>COPPER</div><div>PT</div><div>POTENTIAL TRANSFORMER</div></div><div><div>dB</div><div>UNIT OF SOUND LEVEL</div><div>PAN/TILT/ZOOM</div><div>QUANTITY REMOVE</div></div><div><div>DPDT</div><div>DOUBLE POLE DOUBLE THROW</div><div>QTY</div><div>QUANTITY REMOVE</div></div><div><div>DS</div><div>DISCONNECT SWITCH</div><div>RCP</div><div>REFLECTED CEILING PLAN</div></div><div><div>EA</div><div>EACH</div><div>RMC</div><div>RIGID METAL CONDUIT</div></div><div><div>EC</div><div>EMPTY CONDUIT</div><div>RNC</div><div>RIGID NONMETALLIC CONDUIT</div></div><div><div>EM</div><div>EMERGENCY</div><div>RPM</div><div>REVOLUTIONS PER MINUTE</div></div><div><div>EMT</div><div>ELECTRICAL METALLIC TUBING</div><div>RR</div><div>REMOVE AND RELOCATE</div></div><div><div>ENT</div><div>ELECTRICAL NONMETALLIC TUBING</div><div>SCA</div><div>SHORT CIRCUIT AMPS</div></div><div><div>EPO</div><div>EMERGENCY POWER OFF EQUIPMENT</div><div>SCBA</div><div>STANDARD COLOR AS SELECTED BY ARCHITECT</div></div><div><div>EQUIP</div><div>EXISTING</div><div>SF</div><div>SQUARE FOOT (FEET)</div></div><div><div>EXIST</div><div>EXISTING</div><div>SFBA</div><div>STANDARD FINISH AS SELECTED BY ARCHITECT</div></div><div><div>FA</div><div>FURNITURE MOUNTED</div><div>SPDT</div><div>SINGLE POLE, DOUBLE THROW</div></div><div><div>FCP</div><div>FIRE ALARM CONTROL PANEL</div><div>SPEC</div><div>SPECIFICATION</div></div><div><div>FLA</div><div>FULL LOAD AMPS</div><div>SPST</div><div>SINGLE POLE, SINGLE THROW</div></div><div><div>FMC</div><div>FLEXIBLE METALCONDUIT</div><div>S/S</div><div>START/STOP</div></div><div><div>FOB</div><div>FREIGHT ON BOARD</div><div>ST</div><div>SINGLE THROW</div></div><div><div>FVNR</div><div>FULL VOLTAGE NON-REVERSING</div><div>SWBD</div><div>SWITCHBOARD</div></div><div><div>FVR</div><div>FULL VOLTAGE REVERSING</div><div>SWGR</div><div>SWITCHGEAR</div></div><div><div>G</div><div>GROUND</div><div>TL</div><div>TWIST LOCK</div></div><div><div>GEN</div><div>GENERATOR</div><div>TP</div><div>TELEPHONE POLE</div></div><div><div>GFci</div><div>GROUND FAULT CIRCUIT INTERRUPTER</div><div>TTB</div><div>TWISTED PAIR TELEPHONE TERMINAL BOARD</div></div><div><div>GFP</div><div>GROUND FAULT PROTECTION</div><div>TV</div><div>TELEVISION</div></div><div><div>HD</div><div>HEAVY DUTY</div><div>TVSS</div><div>TRANSIENT VOLTAGE SURGE SUPPRESSER</div></div><div><div>HID</div><div>HIGH INTENSITY DISCHARGE</div><div>TYP</div><div>TYPICAL</div></div><div><div>HOA</div><div>HAND-OFF-AUTOMATIC</div><div>UF</div><div>UNDERFLOOR</div></div><div><div>HP</div><div>HORSE POWER</div><div>UGND</div><div>UNDERGROUND</div></div><div><div>HPF</div><div>HIGH POWER FACTOR</div><div>UPS</div><div>UNINTERRUPTIBLE POWER SUPPLY</div></div><div><div>HPS</div><div>HIGH PRESSURE SODIUM</div><div>V</div><div>VOLTS</div></div><div><div>HV</div><div>HIGH VOLTAGE</div><div>V</div><div>VOLT AMPERE</div></div><div><div>HZ</div><div>HERTZ</div><div>VFC</div><div>VARIABLE FREQUENCY CONTROLLER</div></div><div><div>IG</div><div>ISOLATED GROUND</div><div>W/</div><div>WITH</div></div><div><div>IMC</div><div>INTERMEDIATE METAL CONDUIT</div><div>W/O</div><div>WITHOUT</div></div><div><div>IN/IS</div><div>INSULATED/ISOLATED</div><div>WP</div><div>WEATHERPROOF</div></div><div><div>I/O</div><div>INPUT/OUTPUT</div><div>XFMR</div><div>TRANSFORMER</div></div><div><div>IR</div><div>INFRARED</div><div></div><div></div></div><div><div>J-BOX</div><div>JUNCTION BOX</div><div></div><div></div></div></div> <tr><td colspan="19">GENERAL ELECTRICAL NOTES</td></tr> <tr><td colspan="19">1. CLARIFICATION METHODS: AT THE TIME OF BIDDING, BIDDERS SHALL FAMILIARIZE THEMSELVES WITH THE DRAWINGS AND SPECIFICATIONS. ANY QUESTIONS, MISUNDERSTANDINGS, CONFLICTS, DELETIONS, DISCONTINUED PRODUCTS, CATALOG NUMBER DISCREPANCIES, DISCREPANCIES BETWEEN THE EQUIPMENT SUPPLIED AND THE INTENT OR FUNCTION OF THE EQUIPMENT, ETC. SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER IN WRITING FOR CLARIFICATION PRIOR TO ISSUANCE OF THE FINAL ADDENDUM AND BIDDING OF THE PROJECT. WHERE DISCREPANCIES OR MULTIPLE INTERPRETATIONS OCCUR, THE MOST STRINGENT (WHICH IS GENERALLY RECOGNIZED AS THE MOST COSTLY) THAT MEETS THE INTENT OF THE DOCUMENTS SHALL BE ENFORCED.</td></tr> <tr><td colspan="19">2. OWNER FURNISHED ITEMS: THE OWNER WILL FURNISH MATERIAL AND EQUIPMENT AS INDICATED IN THE CONTRACT DOCUMENTS TO BE INCORPORATED INTO THE WORK. THESE ITEMS ARE ASSIGNED TO THE INSTALLER AND COSTS FOR RECEIVING, HANDLING, STORAGE, IF REQUIRED, AND INSTALLATION ARE INCLUDED IN THE CONTRACT SUM. A. THE INSTALLER'S RESPONSIBILITIES ARE THE SAME AS IF THE INSTALLER FURNISHED THE MATERIALS OR EQUIPMENT. B. THE OWNER WILL ARRANGE AND PAY FOR DELIVERY OF OWNER FURNISHED ITEMS FREIGHT ON BOARD JOB SITE AND THE INSTALLER WILL INSPECT DELIVERIES FOR DAMAGE. IF OWNER FURNISHED ITEMS ARE DAMAGED, DEFECTIVE OR MISSING, DOCUMENT DAMAGED ITEMS WITH THE TRANSPORT COMPANY AND THE OWNER WILL ARRANGE FOR REPLACEMENT. THE OWNER WILL ALSO ARRANGE FOR MANUFACTURER'S FIELD SERVICES, AND THE DELIVERY OF MANUFACTURER'S WARRANTIES AND BONDS TO THE INSTALLER. C. THE INSTALLER IS RESPONSIBLE FOR DESIGNATING THE DELIVERY DATES OF OWNER FURNISHED ITEMS AND FOR RECEIVING, UNLOADING AND HANDLING OWNER FURNISHED ITEMS AT THE SITE. THE INSTALLER IS RESPONSIBLE FOR PROTECTING OWNER FURNISHED ITEMS FROM DAMAGE, INCLUDING DAMAGE FROM EXPOSURE TO THE ELEMENTS, AND TO REPAIR OR REPLACE ITEMS DAMAGED AS A RESULT OF HIS OPERATIONS.</td></tr> <tr><td colspan="19">3. EXPOSED STRUCTURE AREAS (EXCLUDING MECHANICAL, ELECTRICAL, AND COMMUNICATION SPACES): INSTALL RACEWAYS BETWEEN DECK AND STRUCTURE WHEREVER POSSIBLE IN EXPOSED STRUCTURE CEILING AREAS. ROUTE RACEWAYS IN CONCEALED AREAS WHEREVER POSSIBLE. REFER ALL CONDITIONS WHERE RACEWAYS MUST BE INSTALLED WHICH CANNOT COMPLY WITH THESE REQUIREMENTS TO THE ARCHITECT.</td></tr> <tr><td colspan="19">4. SUBMITTALS: PROVIDE SUBMITTALS IN THREE RING BINDERS WITH JOB NAME, SUBCONTRACTOR, AND VOLUME ON THE BINDING. PREPARE TABS FOR EACH SPECIFICATION SECTION REQUIRING SUBMITTALS. PREPARE INDEX OF EQUIPMENT SUBMITTED IN EACH TAB.</td></tr> <tr><td colspan="19">5. REFLECTED CEILING PLANS: COORDINATE THE LOCATION OF LIGHT FIXTURES WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. REFER ALL DISCREPANCIES TO THE ARCHITECT AND ENGINEER.</td></tr> <tr><td colspan="19">DEFINITIONS</td></tr> <tr><td colspan="19">NOTE: ALL DEFINITIONS MAY NOT BE USED.</td></tr> <tr><td colspan="19">INDICATED: THE TERM "INDICATED" REFERS TO GRAPHIC REPRESENTATIONS, NOTES, OR SCHEDULES ON THE DRAWINGS, OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND SIMILAR REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE TERMS SUCH AS "SHOWN", "NOTED", "SCHEDULED", AND "SPECIFIED" ARE USED, IT IS TO HELP THE READER LOCATE THE REFERENCE, NO LIMITATION ON LOCATION IS INTENDED. DIRECTED: TERMS SUCH AS "DIRECTED", "REQUESTED", "AUTHORIZED", "SELECTED", "APPROVED", "REQUIRED", AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER", "REQUESTED BY THE ENGINEER", AND SIMILAR PHRASES. APPROVED: THE TERM "APPROVED", WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS. FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS." INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS." PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE." INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM. TECHNOLOGY SYSTEMS: THE TERM "TECHNOLOGY SYSTEMS" IS USED TO DESCRIBE ALL LOW VOLTAGE SYSTEMS GENERALLY REFERRED TO AS "SPECIAL SYSTEMS". THESE SYSTEMS INCLUDE BUT ARE NOT NECESSARILY LIMITED TO ALL SYSTEMS WHICH UTILIZE VOLTAGES OF LESS THAN 71 VOLTS SUCH AS SOUND SYSTEMS, VIDEO SYSTEMS, TV SYSTEMS, SECURITY SYSTEMS, VOICE AND DATA CABLING SYSTEMS, ETC...</td></tr> <tr><td colspan="19">ELECTRICAL SHEET INDEX</td></tr> <tr><td colspan="19">SHEET NO SHEET TITLE</td></tr> <tr><td colspan="19">E-001 SYMBOL LEGEND/SHEET INDEX</td></tr> <tr><td colspan="19">E-101 ELECTRICAL SITE PLN</td></tr> <tr><td colspan="19">E-102 DEMOLITION PLANS</td></tr> <tr><td colspan="19">E-103 ELECTRICAL PLANS</td></tr> <tr><td colspan="19">E-501 DETAILS</td></tr> <tr><td colspan="19">E-502 DETAILS</td></tr> <tr><td colspan="19">E-601 SCHEDULES</td></tr>																			GENERAL ELECTRICAL NOTES																			1. CLARIFICATION METHODS: AT THE TIME OF BIDDING, BIDDERS SHALL FAMILIARIZE THEMSELVES WITH THE DRAWINGS AND SPECIFICATIONS. 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SYMBOL LEGEND	
SYMBOL	DESCRIPTION
WIRING DEVICES	
	RECEPTACLE, DUPLEX: NEMA 5-20R.
	RECEPTACLE, DUPLEX, ABOVE COUNTER: NEMA 5-20R.
	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER: NEMA 5-20R.
	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, WEATHERPROOF: NEMA 5-20R.
	RECEPTACLE, QUADRUPLEX: NEMA 5-20R.
	MULTI-OUTLET ASSEMBLY: NEMA 5-20R.
	SWITCH, SINGLE POLE ("X" INDICATES FIXTURES CONTROLLED).
	SWITCH, THREE-WAY ("X" INDICATES FIXTURES CONTROLLED).
ELECTRICAL POWER AND DISTRIBUTION	
	CIRCUIT BREAKER, MOLDED CASE (ONE-LINE DIAGRAM).
	MOTOR.
	TRANSFORMER (ONE-LINE DIAGRAM).
	PANELBOARD WITH MAIN CIRCUIT BREAKER. SIZE AND PHASE AS SHOWN (ONE-LINE DIAGRAM).
	PANELBOARD WITH MAIN AND SUB FEED CIRCUIT BREAKER (ONE-LINE DIAGRAM).
	TRANSFER SWITCH (ONE-LINE DIAGRAM).
	GENERATOR, POWER (ONE-LINE DIAGRAM).
	METER.
	DISCONNECT SWITCH, FUSED.
	DISCONNECT SWITCH, UNFUSED.
	PUSHBUTTON.
	PUSHBUTTONS, MOTOR CONTROL.
	PANELBOARD CABINET, FLUSH MOUNTED.
	PANELBOARD CABINET, SURFACE MOUNTED, 1 SECTION.
	SWITCH, TOGGLE MOTOR STARTER WITH OVERLOAD PROTECTION.
SITE ELECTRICAL AND COMMUNICATIONS UTILITIES	
	UTILITY, COMMUNICATIONS MANHOLE.
TV DISTRIBUTION	
	TV OUTLET.
SECURITY	
	INTRUSION DETECTION HEADEND EQUIPMENT.

ABBREVIATIONS	
NOTE: ALL ABBREVIATIONS MAY NOT BE USED.	
1P 1PH 1WAY 2/C 2WAY 3/C 3PH 3WAY 4OUT	SINGLE POLE SINGLE-PHASE ONE-WAY TWO-CONDUCTOR TWO-WAY THREE-CONDUCTOR THREE-PHASE THREE-WAY QUADRUPLE RECEPTACLE OUTLET
4PDT 4PST	FOUR-POLE DOUBLE THROW FOUR-POLE SINGLE THROW
4W 4WAY A AC ADA	FOUR-WIRE FOUR-WAY ABOVE COUNTER ARMORED CABLE AMERICANS WITH DISABILITIES ACT ADJACENT
ADJ AFF AFC AIC	ADJACENT ABOVE FINISHED FLOOR ABOVE FINISHED GRADE AMPERE INTERRUPTING CAPACITY
ALUM AMP ANN AP	ALUMINUM AMPERE ANNUNCIATOR ACCESS POINT (WIRELESS DATA)
AR ASC ATS	AS REQUIRED AMPS SHORT CIRCUIT AUTOMATIC TRANSFER SWITCH
AV AWG BB XFMR	AUDIO VISUAL AMERICAN WIRE GAGE BUCK-BOOST TRANSFORMER
C CATV	CEILING MOUNTED COMMUNITY ANTENNA TELEVISION
CB CCBA	CIRCUIT BREAKER CUSTOM COLOR AS SELECTED BY ARCHITECT
CCTV	CLOSED CIRCUIT TELEVISION
CFBA CF/Ci CF/Oi	CUSTOM FINISH AS SELECTED BY ARCHITECT CONTRACTOR FINISHED/ CONTRACTOR INSTALLED CONTRACTOR FINISHED/ OWNER INSTALLED
CK CM CND CO COR	CIRCUIT CONSTRUCTION MANAGER CONDUIT CONVENIENCE OUTLET CONTRACTING OFFICER'S REPRESENTATIVE
CP CT CTV CU dBA DFDT	CONTROL PANEL CURRENT TRANSFORMER CABLE TELEVISION COPPER UNIT OF SOUND LEVEL DOUBLE POLE DOUBLE THROW
DS EA EC EM EMT	DISCONNECT SWITCH EACH EMPTY CONDUIT EMERGENCY ELECTRICAL METALLIC TUBING
ENT	ELECTRICAL NONMETALLIC TUBING
EPO EQUIP EXIST	EMERGENCY POWER OFF EQUIPMENT EXISTING
F FA FCP	FURNITURE MOUNTED FIRE ALARM FIRE ALARM CONTROL PANEL
FLA FMC FOB FVNR	FULL LOAD AMPS FLEXIBLE METALCONDUIT FREIGHT ON BOARD FULL VOLTAGE
FVR G GEN GFCI	NON-REVERSING FULL VOLTAGE REVERSING GROUND GENERATOR GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
HD HID	HEAVY DUTY HIGH INTENSITY DISCHARGE
HOA HP HPF HPS HZ	HAND-OFF-AUTOMATIC HORSE POWER HIGH POWER FACTOR HIGH PRESSURE SODIUM HERTZ
IG IMC	ISOLATED GROUND INTERMEDIATE METAL CONDUIT
IN/IS I/O IR J-BOX	INSULATED/ISOLATED INPUT/OUTPUT INFRARED JUNCTION BOX
KV KVA KVAR	KILOVOLT KILOVOLT AMPERE KILOVOLT AMPERE REACTIVE
KW KWH LED LFMC	KILOWATT KILOWATT HOUR LIGHT EMITTING DIODE LIQUID TIGHT FLEXIBLE METAL CONDUIT
LFNC LPS LRA LTG LV MATV	LIQUID TIGHT FLEXIBLE NONMETALLIC CONDUIT LOW PRESSURE SODIUM LOCKED ROTOR AMPS LIGHTING LOW VOLTAGE MASTER ANTENNA TELEVISION SYSTEM
MAX MC MCA MCB MCC MCP	MAXIMUM METAL CLAD MINIMUM CIRCUIT AMPS MAIN CIRCUIT BREAKER MOTOR CONTROL CENTER MOTOR CIRCUIT PROTECTION
MDP MG MH MIN MLO MOCP	MAIN DISTRIBUTION MOTOR GENERATOR MANHOLE MINIMUM MAIN LUGS ONLY MAXIMUM OVERCURRENT PROTECTION
NA NC NEC	NOT APPLICABLE NORMALLY CLOSED NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFC NFPA	NATIONAL FIRE CODE NATIONAL FIRE PROTECTION ASSOCIATION
NIC NL NO NPS OC OCP	NOT IN CONTRACT NIGHT LIGHT NORMALLY OPEN NOT TO SCALE ON CENTER OVER CURRENT PROTECTION
OF/Ci OF/Oi	OWNER FURNISHED/ CONTRACTOR INSTALLED OWNER FURNISHED/ OWNER INSTALLED
OPF OH DR	OBTAIN FROM PLANS OVERHEAD (COILING) DOOR
OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC	OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETALLIC CONDUIT
RPM RR SCA SCBA	REVOLUTIONS PER MINUTE REMOVE AND RELOCATE SHORT CIRCUIT AMPS STANDARD COLOR AS SELECTED BY ARCHITECT
SF SFBA	SQUARE FOOT (FEET) STANDARD FINISH AS SELECTED BY ARCHITECT
SPDT	SINGLE POLE, DOUBLE THROW
SPEC SPST	SPECIFICATION SINGLE POLE, SINGLE THROW
S/S ST SWBD SWGR TL	START/STOP SINGLE THROW SWITCHBOARD SWITCHGEAR TWIST LOCK
TP TTB	TELEPHONE POLE TWISTED PAIR TELEPHONE TERMINAL BOARD
TV TVSS	TELEVISION TRANSIENT VOLTAGE SURGE SUPPRESSER
TYP UGND UPS	TYPICAL UNDERGROUND UNINTERRUPTIBLE POWER SUPPLY
V VA VFC	VOLTS VOLT AMPERE VARIABLE FREQUENCY CONTROLLER
W/ W/O WP XFMR	WITH WITHOUT WEATHERPROOF TRANSFORMER

GENERAL ELECTRICAL NOTES

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SHEET NO	SHEET TITLE
E-001	SYMBOL LEGEND/SHEET INDEX
E-101	ELECTRICAL SITE PLN
E-102	DEMOLITION PLANS
E-103	ELECTRICAL PLANS
E-501	DETAILS
E-502	DETAILS
E-601	SCHEDULES

CONSULTANT INFORMATION



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www.spectrum-engineers.com

UTAH NATIONAL GUARD

Utah National Guard
New Guard House
CAMP W.G.WILLIAMS, UTAH

SHEET TITLE

Symbol Legend/Sheet Index

REVISONS DATE BY DESCRIPTION

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DRAWN BY

PSS

CHECKED BY

DLA

PROJECT NO

06286480

BRAWING NO

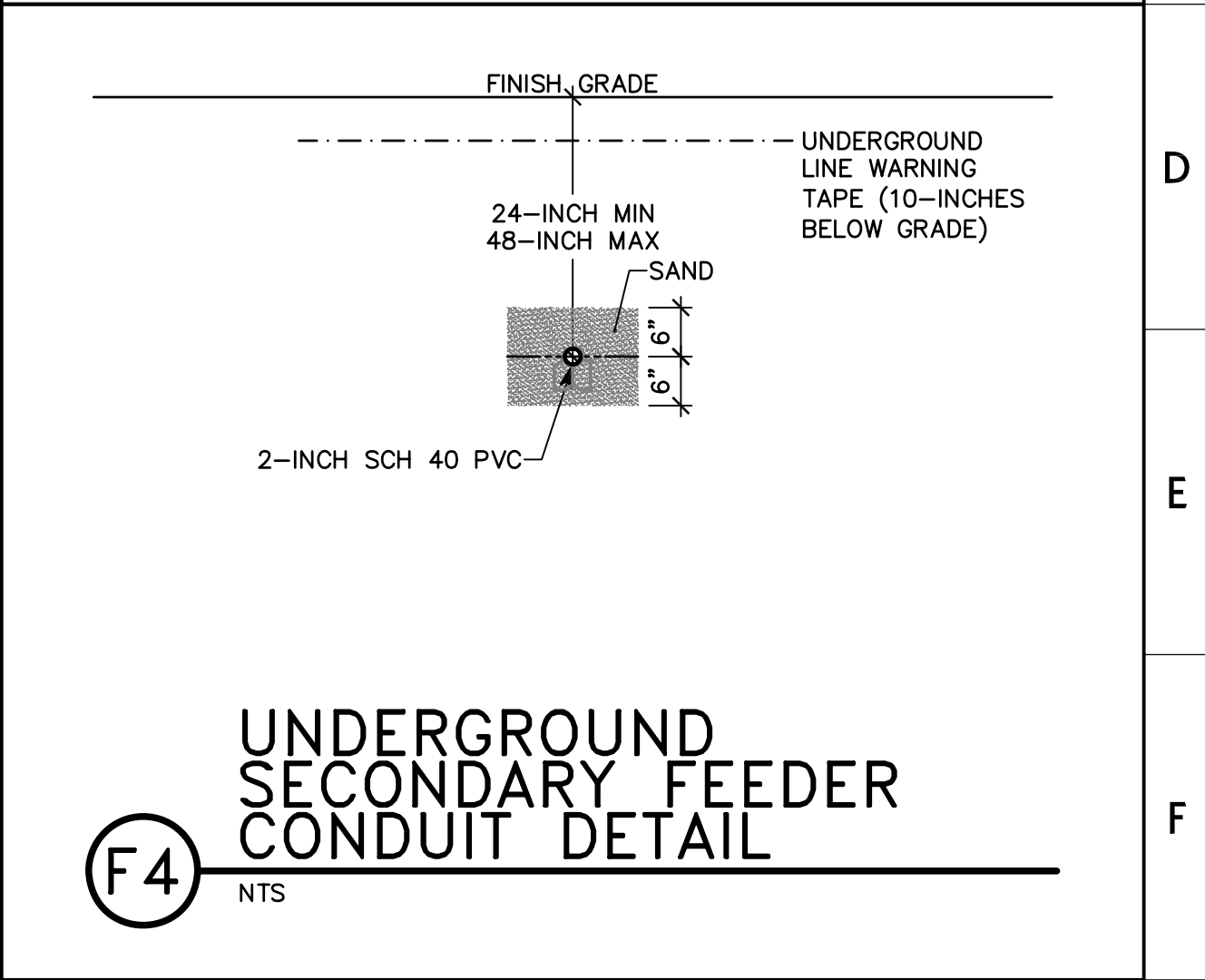
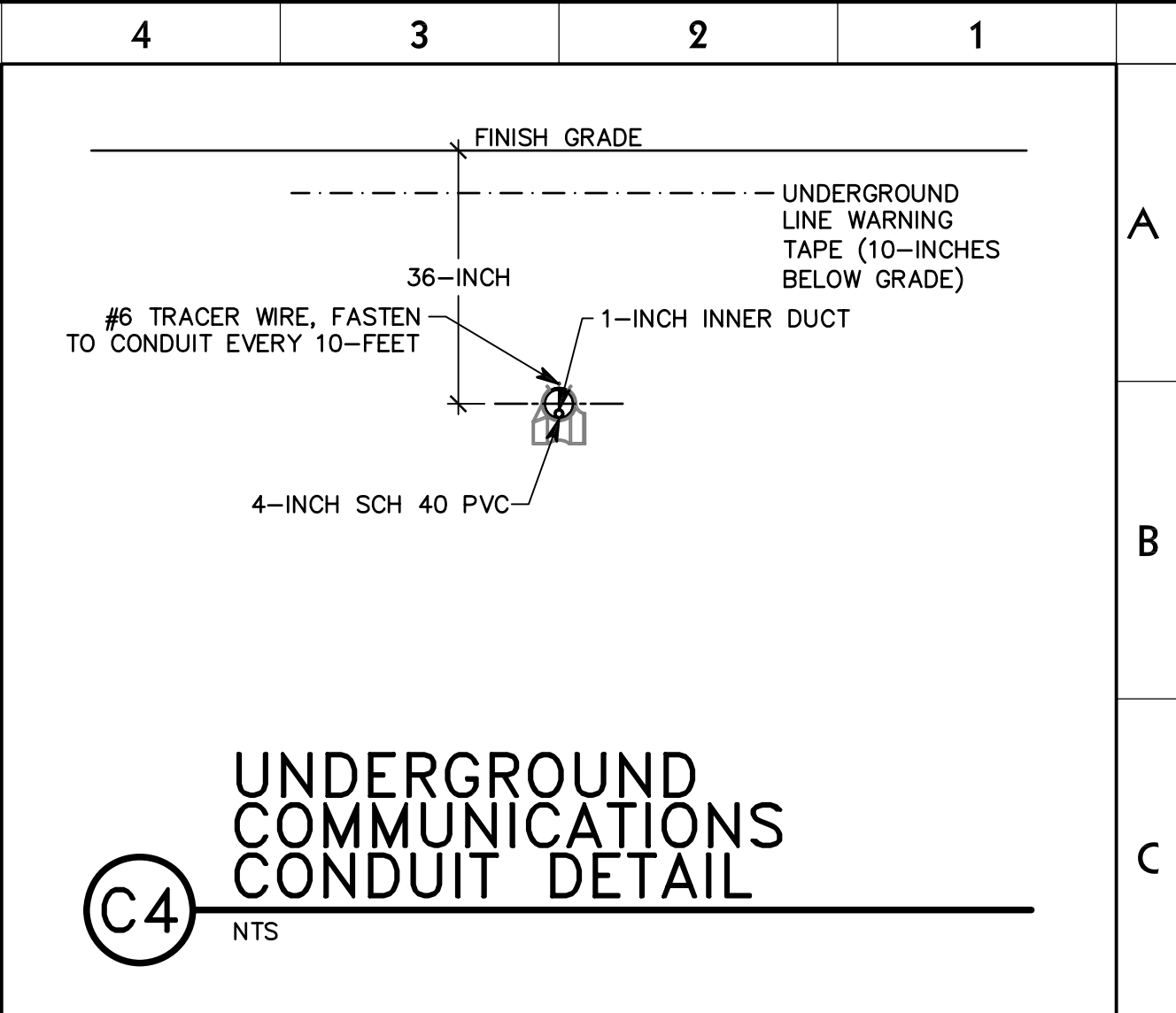
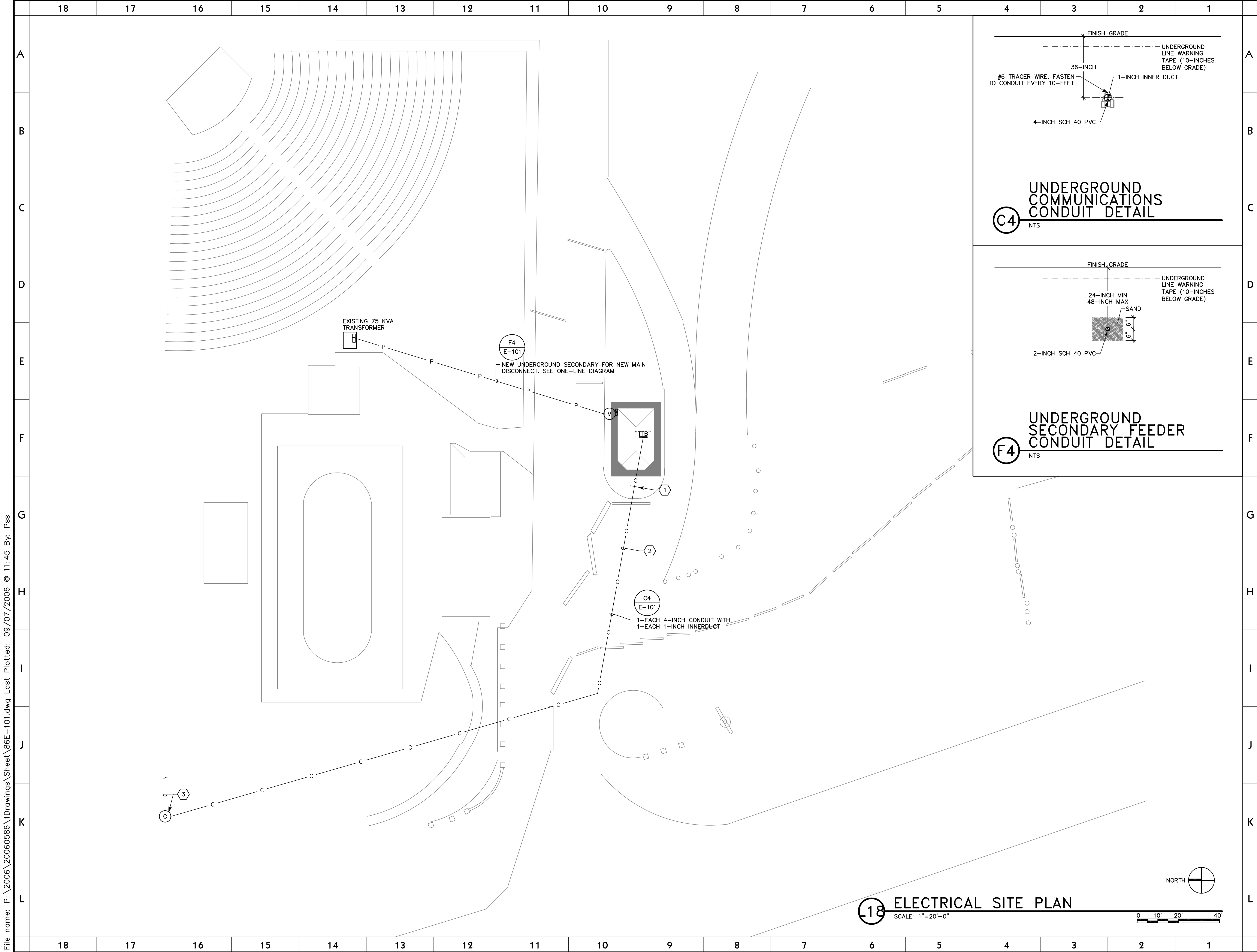
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2006-09-07

E-001

www.millwright.com

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ENGINEERS

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SHEET KEYNOTES

1. UNDER BASE BID: PROVIDE 4-INCH CONDUIT WITHOUT INNERDUCT FOR COMMUNICATION STUBBED AND CAPPED TO 5-FEET OUTSIDE THE BUILDING.
2. ADD ALT #1: PROVIDE ADD ALTERNATE PRICING FOR COMMUNICATIONS CONDUIT TO EXTEND TO COMMUNICATION MANHOLE APPROXIMATELY 420- FEET AWAY.
3. EXISTING UNDERGROUND COMMUNICATIONS LINE AND MANHOLE. NEW 4-INCH COMMUNICATIONS CONDUIT TO TIE INTO EXISTING MANHOLE UNDER ADD. ALTERNATE #1.

Utah National Guard
New Guard House
CAMP W.G.WILLIAMS, UTAH

SHEET TITLE

Electrical Site Plan

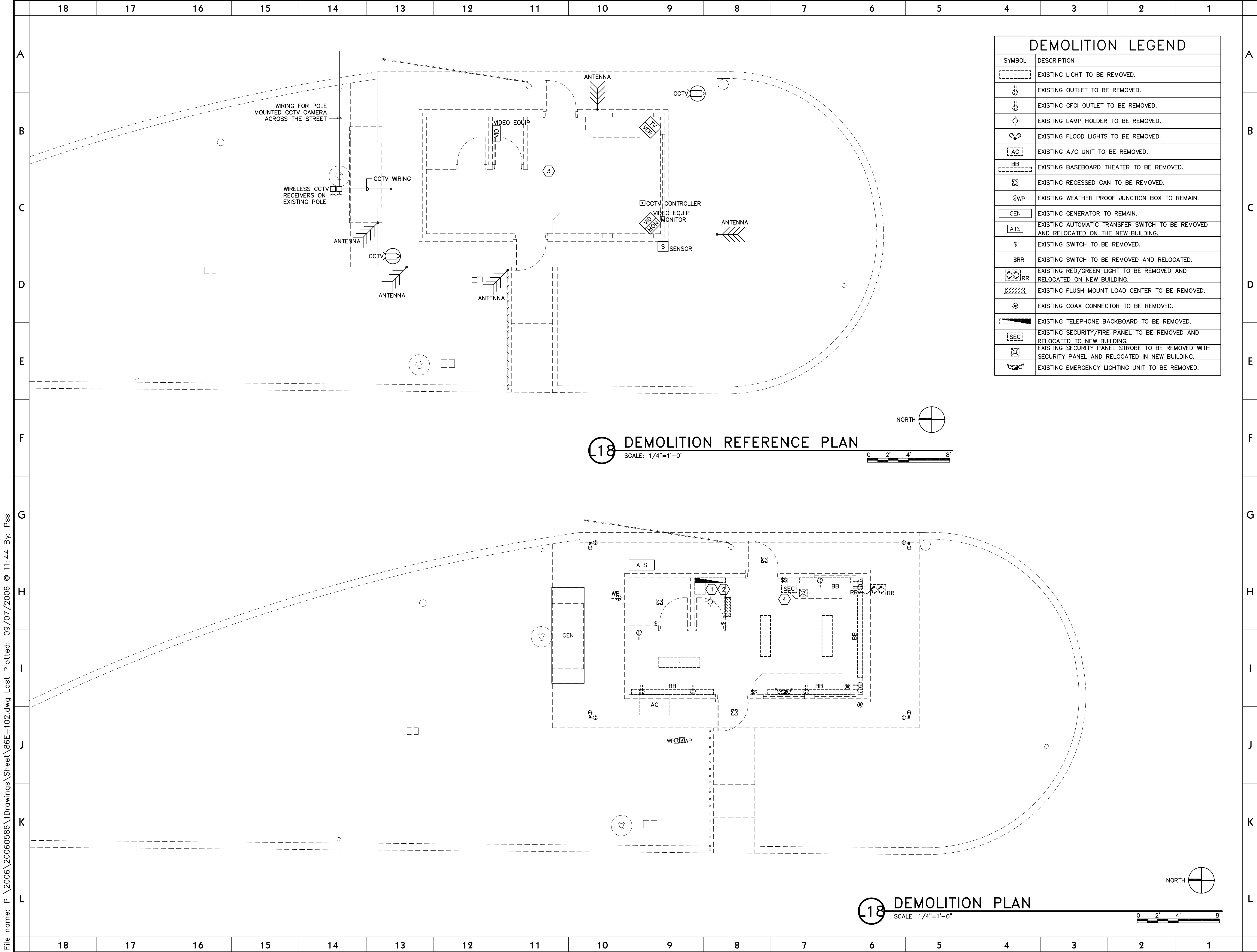
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E-101

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DEMOLITION LEGEND	
SYMBOL	DESCRIPTION
	EXISTING LIGHT TO BE REMOVED.
	EXISTING OUTLET TO BE REMOVED.
	EXISTING GFCI OUTLET TO BE REMOVED.
	EXISTING LAMP HOLDER TO BE REMOVED.
	EXISTING FLOOD LIGHTS TO BE REMOVED.
	EXISTING A/C UNIT TO BE REMOVED.
	EXISTING BASEBOARD THEATER TO BE REMOVED.
	EXISTING RECESSED CAN TO BE REMOVED.
	EXISTING WEATHER PROOF JUNCTION BOX TO REMAIN.
	EXISTING GENERATOR TO REMAIN.
	EXISTING AUTOMATIC TRANSFER SWITCH TO BE REMOVED AND RELOCATED ON THE NEW BUILDING.
	EXISTING SWITCH TO BE REMOVED.
	EXISTING SWITCH TO BE REMOVED AND RELOCATED.
	EXISTING RED/GREEN LIGHT TO BE REMOVED AND RELOCATED ON NEW BUILDING.
	EXISTING FLUSH MOUNT LOAD CENTER TO BE REMOVED.
	EXISTING COAX CONNECTOR TO BE REMOVED.
	EXISTING TELEPHONE BACKBOARD TO BE REMOVED.
	EXISTING SECURITY/FIRE PANEL TO BE REMOVED AND RELOCATED TO NEW BUILDING.
	EXISTING SECURITY PANEL STROBE TO BE REMOVED WITH SECURITY PANEL AND RELOCATED IN NEW BUILDING.
	EXISTING EMERGENCY LIGHTING UNIT TO BE REMOVED.

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GENERAL SHEET NOTES

- PROVIDE GROUNDING CONDUCTORS PER NEC FOR CIRCUITS AFFECTED BY THIS WORK.
- RELOCATE AND/OR REROUTE EXISTING CONDUIT, WIRING OR OTHER EQUIPMENT THAT CONFLICTS WITH DEMOLITION OR NEW CONSTRUCTION.
- REMOVE ALL CONDUIT, WIRING AND CABLING THAT IS ABANDONED OR WILL BECOME ABANDONED AS A RESULT OF THIS PROJECT.
- WHERE DEVICES, LIGHT FIXTURES OR OTHER EQUIPMENT ARE BEING REMOVED, REMOVE ASSOCIATED CONDUIT AND WIRING TO PANEL BOARD OR FIRST ACTIVE JUNCTION BOX.

SHEET KEYNOTES

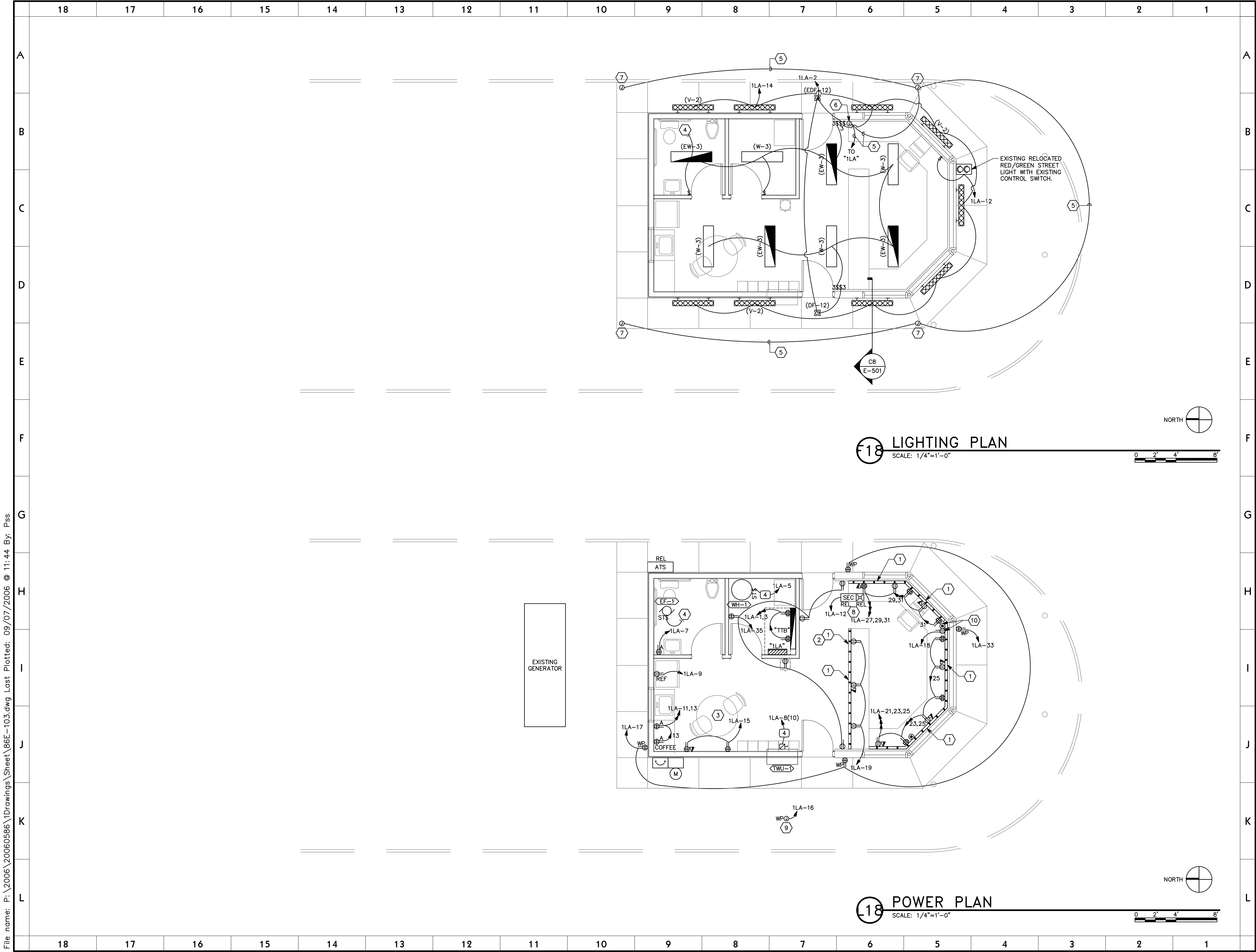
- EXISTING EQUIPMENT ON TELEPHONE BOARD AND ON WALL IN THIS ROOM SHALL BE SALVAGED AND RETURNED TO UTAH NATIONAL GUARD (UTNG) FOR REINSTALLATION ON NEW BACKBOARD. VERIFY ALL PIECES OF EQUIPMENT WITH UTNG PROJECT MANAGER, SECURITY AND COMMUNICATIONS REPRESENTATIVES PRIOR TO REMOVAL.
- CONTRACTOR SHALL LOCATE AND PROTECT INCOMING TELEPHONE SERVICE CONDUIT & WIRING FOR REUSE WITH THE NEW BUILDING TELEPHONES.
- EQUIPMENT SHOWN ON THIS PLAN IS FOR REFERENCE TO THE CONTRACTOR AND MAY NOT REFLECT ALL OF THE EQUIPMENT REQUIRED TO BE RELOCATED INTO THE NEW BUILDING. CONTRACTOR SHALL COORDINATE CLOSELY WITH UTNG FOR ALL WIRING, EQUIPMENT, AND AUXILIARY DEVICES REQUIRED TO BE RELOCATED PRIOR TO BID. CONTRACTOR SHALL INCLUDE PRICING FOR ALL RACEWAYS REQUIRED FOR CONNECTION TO THESE SYSTEMS.
- DOCUMENT CONNECTIONS AND OPERATION SCHEME OF SECURITY/FIRE PANEL PRIOR TO REMOVAL. MATCH EXISTING SETUP IN THE NEW BUILDING. SEE KEYNOTE 8, SHEET E-103.

Utah National Guard
New Guard House
CAMP W.G.WILLIAMS, UTAH

SHEET TITLE			
Demolition Plans			
REVISIONS	DATE	BY	DESCRIPTION
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PROJECT NO.		DRAWING NO.	
06286480			
DATE			
2006-09-07			

E-102

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SHEET KEYNOTES

1. PROVIDE WIREMOLD 4000 OR EQUAL. DUAL CHANNEL STEEL RACEWAY. MOUNT 6-INCHES ABOVE THE COUNTERTOP.
2. MOUNT SURFACE WIREMOLD IN MILLWORK. COORDINATE WITH MILLWORK INSTALLER.
3. PROVIDE UFER GROUND IN NEW CONCRETE FOUNDATION AT APPROXIMATELY THIS LOCATION. BOND TO REBAR.
4. CONNECT EXHAUST FAN TO LIGHTING CIRCUIT AND CONTROL WITH LIGHTS.
5. PROVIDE 0.75-INCH CONDUIT WITH PULL STRING.
6. MOUNT JUNCTION BOX IN WALL AT LIGHT SWITCH HEIGHT.
7. MOUNT 4-SQUARE JUNCTION BOX IN SOFFIT. PROVIDE GASKETED COVER PLATE.
8. RECONNECT RELOCATED SECURITY/FIRE PANEL TO MATCH PREVIOUS SETUP AND OPERATION. REPROGRAM AND TEST AS REQUIRED. VERIFY REQUIREMENTS WITH UTAH NATIONAL GUARD PRIOR TO BIDDING.
9. RECONNECT EXISTING SPRINKLER CONTROLS TO NEW PANEL. FIELD VERIFY LOCATION AND REQUIREMENTS.
10. PROVIDE OUTLET AND CATV RACEWAY AT +84" AFF FOR POWER TO TV AND VCR. COORDINATE LOCATION OF DEVICES WITH UTAH NATIONAL GUARD PRIOR TO ROUGH IN.

SHEET TITLE

Electrical Plans

REVISIONS	DATE	BY	DESCRIPTION
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DRAWN BY		PSS	CHECKED BY DLA
PROJECT NO.		06286480	DRAWING NO.
DATE		2006-09-07	E-103

GENERAL SHEET NOTES

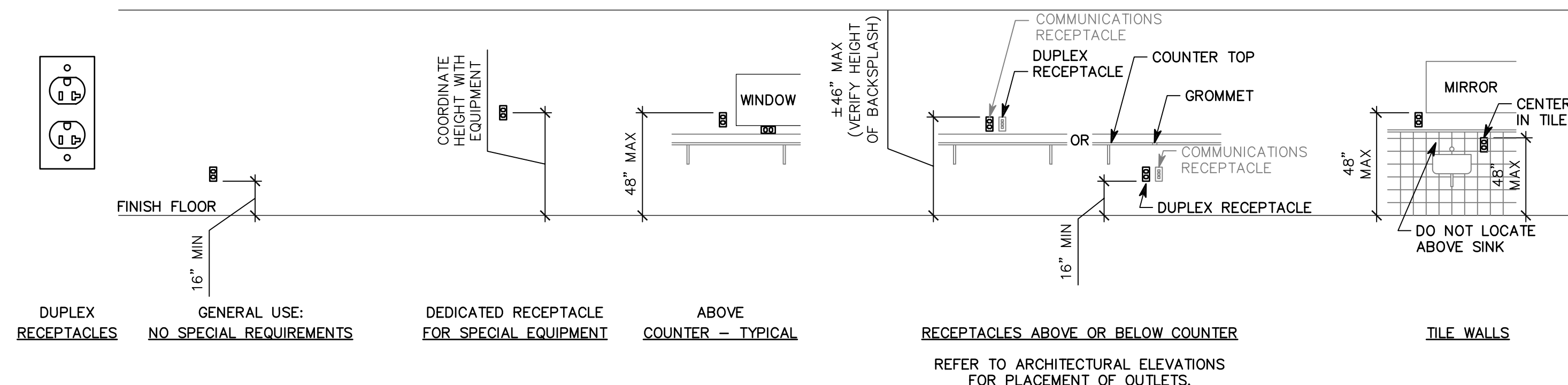
1. PROVIDE NEMA 3R ENCLOSURES FOR EQUIPMENT LOCATED OUTDOORS. REFER TO PLANS FOR EQUIPMENT LOCATIONS.
2. REFER TO PLANS FOR CONSTRAINTS ON PHYSICAL DIMENSIONS AND CLEARANCE REQUIREMENTS OF EQUIPMENT. PROVIDE EQUIPMENT DIMENSIONS THAT FALL WITHIN THE CONSTRAINTS OF EACH SPECIFIC LOCATION.
3. ALL EQUIPMENT SHALL BE CONSTRUCTED AND BRACED FOR THE SEISMIC CONDITIONS OF THE PROJECT. REFER TO SPECIFICATIONS SECTION 16071 FOR REQUIREMENTS.

GENERAL DETAIL NOTES

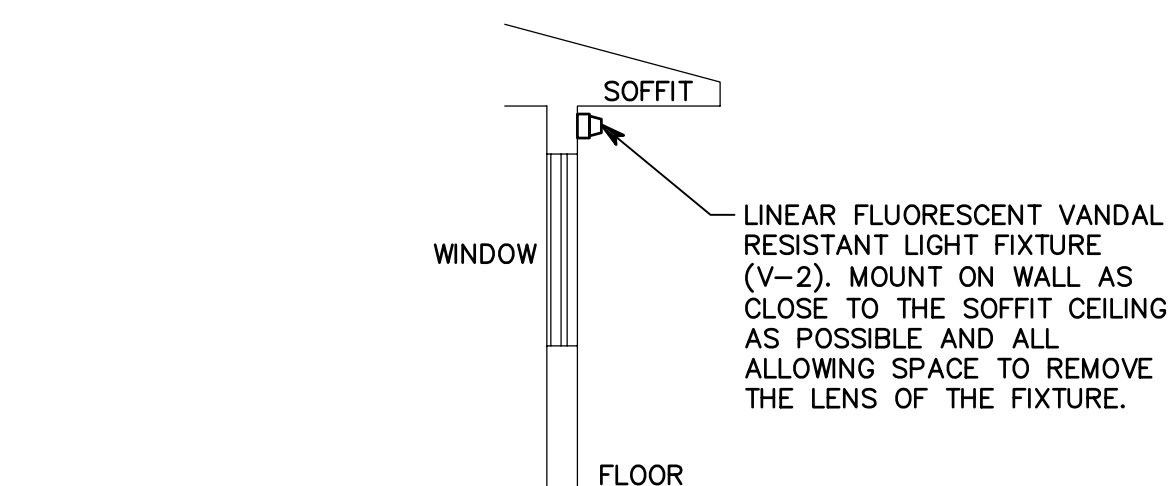
1. DETERMINE MOUNTING HEIGHTS OF ELECTRICAL AND ELECTRONIC EQUIPMENT IN THE FOLLOWING ORDER OF PRIORITY:
 - 1 - ELEVATIONS (ARCHITECTURAL, ELECTRICAL, MECHANICAL, ETC).
 - 2 - EQUIPMENT SHOP DRAWINGS.
 - 3 - FIELD INSTRUCTIONS.
2. LOCATE RECEPTACLES SERVING THE SAME TYPE OF USE AT A UNIFORM HEIGHT UNLESS DIRECTED OTHERWISE.
3. MECHANICAL, ELECTRICAL, AND COMMUNICATION ROOMS: COORDINATE LOCATION OF LIGHTING AND POWER RECEPTACLES WITH EQUIPMENT, PIPING, AND DUCTWORK. DO NOT INSTALL RECEPTACLES BEHIND EQUIPMENT OR WHERE OTHERWISE INACCESSIBLE. POSITION LIGHTING REGARDLESS OF WHERE SHOWN ON DRAWING TO PROVIDE PROPER ILLUMINATION.
4. MOUNT RECEPTACLE BOXES FOR SWITCHES AND RECEPTACLES WITH LONG AXIS OF THE DEVICE VERTICAL UNLESS OTHERWISE INDICATED.
5. SET BOXES WITH PLASTER RINGS FLUSH WITH FINISHED SURFACE.
6. LOCATE BOX COVERS OR DEVICE PLATES SO THEY WILL NOT SPAN DIFFERENT TYPES OF BUILDING FINISHES EITHER VERTICALLY OR HORIZONTALLY.
7. VERIFY ALL DOOR CONDITIONS ON ARCHITECTURAL DRAWINGS PRIOR TO INSTALLING SWITCHES.
8. LOCATE WIRING DEVICES WHICH ARE ADJACENT AND ARE COMPATIBLE VOLTAGES IN ONE PLATE.

DETAIL KEYNOTES

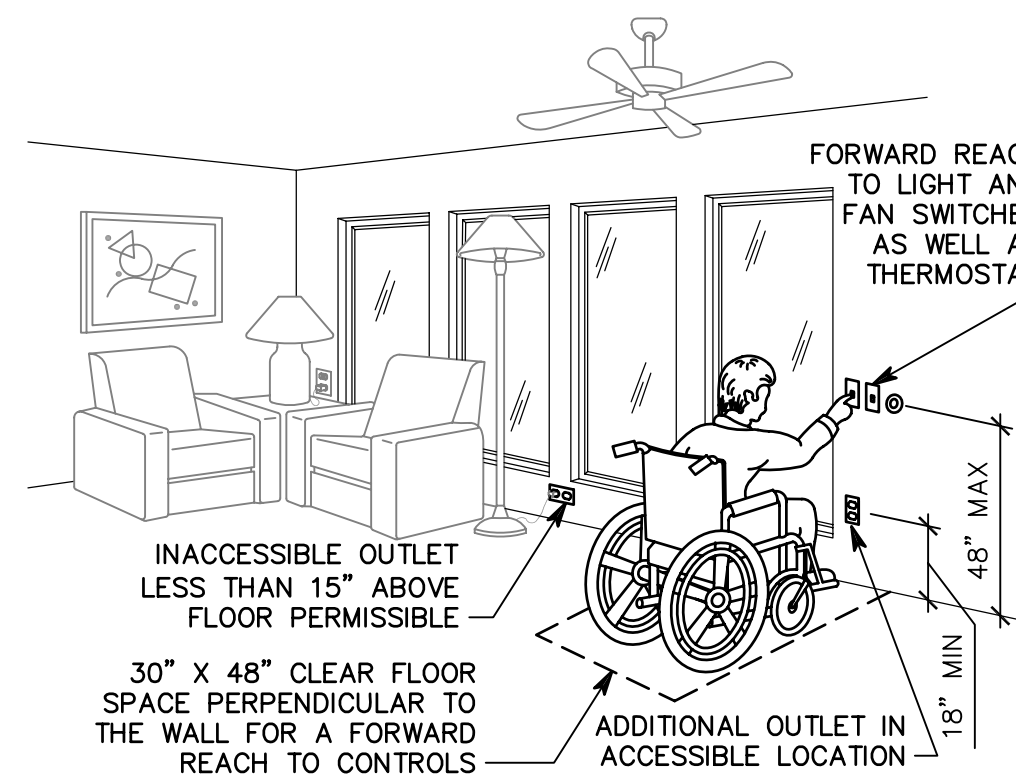
1. LOCATE RECEPTACLES BEHIND DRINKING FOUNTAINS.
2. REFER TO ARCHITECTURAL ELEVATIONS FOR PLACEMENT OF OUTLETS.



F18 RECEPTACLE MOUNTING DETAILS



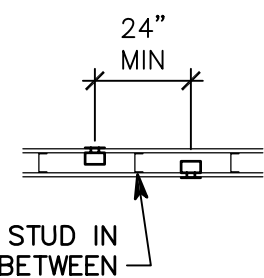
(C8) V-2 MOUNTING DETAIL
NTS



F8 **ADA DETAIL**
NTS

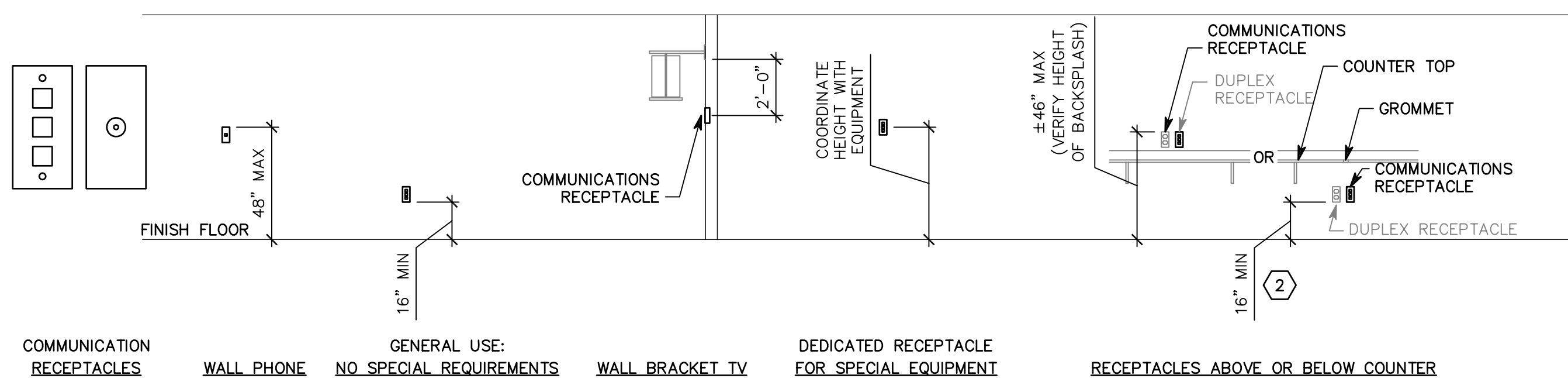
DETAIL KEYNOTES

1. PROVIDE 1-EACH 1-INCH CONDUIT WITH CONTROL WIRING PER MANUFACTURER'S WRITTEN INSTRUCTIONS. VERIFY OPERATION REQUIREMENTS WITH UTAH NATIONAL GUARD.

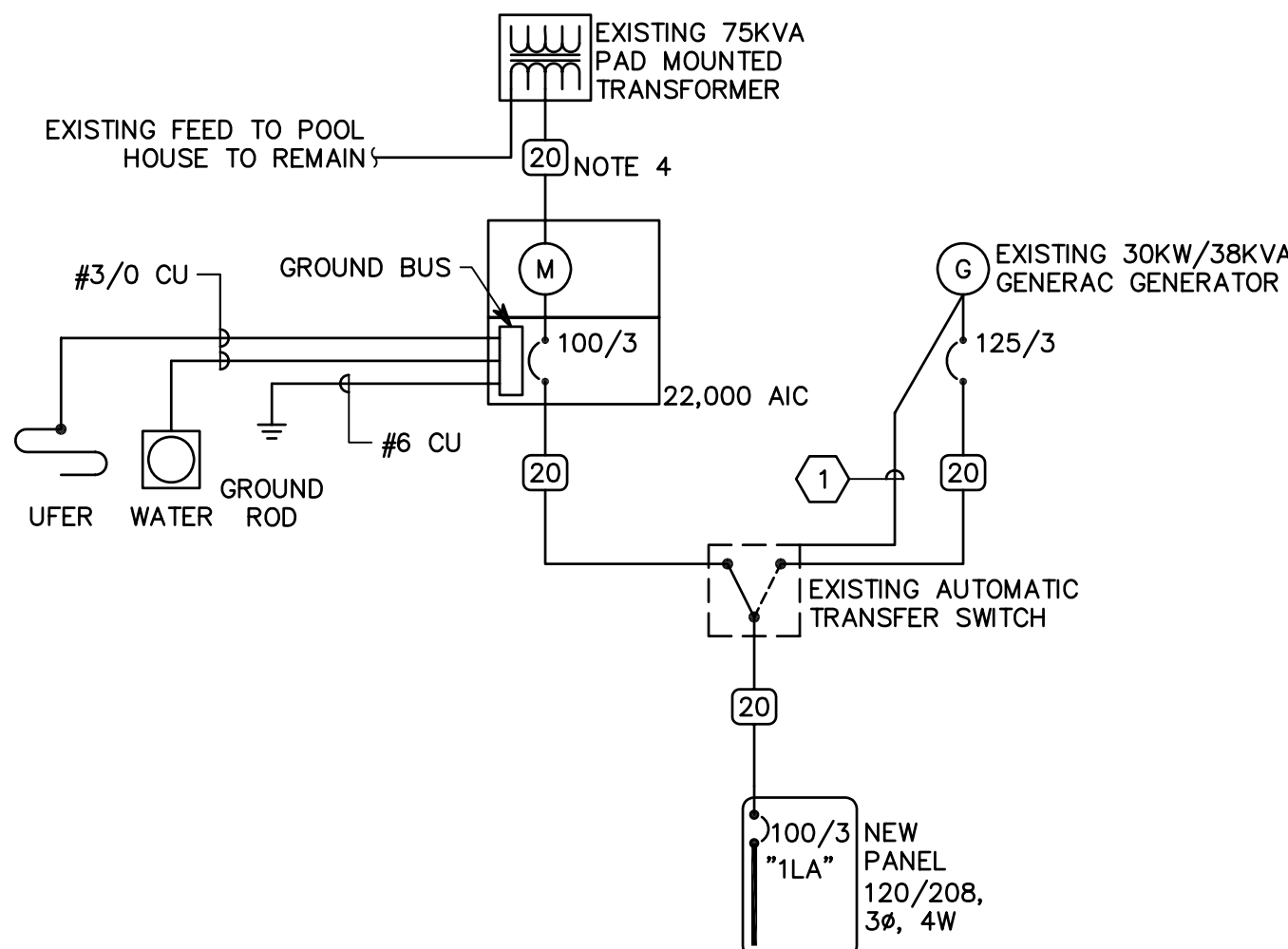


BOXES ON OPPOSITE SIDES OF WALL

BOX MOUNTING DETAILS




18 COMMUNICATION MOUNTING DETAILS
NTS



L9 ONE-LINE DIAGRAM

CONDUCTOR AND CONDUIT SCHEDULE


 SCHEDULE NUMBER
 SUBSCRIPT (NOTE 5)

(E.G.) $\boxed{5}_{IG}$

SYM	AMP	CONDUIT SIZE	CONDUCTOR(NOTE 1)			IG	SE	NOTES
			QTY	SIZE	G			
(1)	20	.75	2	12	12	12	8	2
(2)	20	.75	3	12	12	12	8	2,3
(3)	20	.75	4	12	12	12	8	2,3
(4)	30	.75	2	10	10	10	8	2
(5)	30	.75	3	10	10	10	8	2
(6)	30	.75	4	10	10	10	8	2
(7)	40	1	2	8	10	8	6	2
(8)	40	1	3	8	10	8	6	2
(9)	40	1	4	8	10	8	6	2
(10)	55	1	2	6	10	8	4	2
(11)	55	1	3	6	10	8	4	2
(12)	55	1.25	4	6	10	8	4	2
(13)	70	1	2	4	8	4	2	2
(14)	70	1.25	3	4	8	4	2	2
(15)	70	1.25	4	4	8	4	2	2
(16)	85	1.25	2	3	8	3	2	2
(17)	85	1.25	3	3	8	3	2	2
(18)	85	1.25	4	3	8	3	2	2
(19)	95	1.25	3	2	8	2	2	2
(20)	95	1.50	4	2	8	2	2	2
(21)	130	1.50	3	1	6	2	2	2
(22)	130	1.50	4	1	6	2	2	2
(23)	150	2	3	1/0	6	2	1/0	2
(24)	150	2	4	1/0	6	2	1/0	2
(25)	175	2	3	2/0	6	2	2/0	2
(26)	175	2	4	2/0	6	2	2/0	2
(27)	200	2	3	3/0	6	2	2/0	2
(28)	200	2.50	4	3/0	6	2	2/0	2
(29)	230	2.50	3	4/0	4	2	2/0	2
(30)	230	2.50	4	4/0	4	2	2/0	2
(31)	255	2.50	3	250	4	1	2/0	2
(32)	255	2.50	4	250	4	1	2/0	2
(33)	310	3	3	350	3	1/0	3/0	2
(34)	310	3	4	350	3	1/0	3/0	2
(35)	380	3.50	3	500	3	3/0	3/0	2
(36)	380	4	4	500	3	3/0	3/0	2
(37)	400	2 EA 2	3	3/0	3	3/0	3/0	2
(38)	400	2 EA 2.50	4	3/0	3	3/0	3/0	2
(39)	510	2 EA 2.50	3	250	1	4/0	3/0	2
(40)	510	2 EA 3	4	250	1	4/0	3/0	2
(41)	620	2 EA 3	3	350	1/0	4/0	3/0	2,4
(42)	620	2 EA 3	4	350	1/0	4/0	3/0	2,4
(43)	760	2 EA 3.50	3	500	1/0	4/0	3/0	2,4
(44)	760	2 EA 4	4	500	1/0	4/0	3/0	2,4
(45)	855	3 EA 3	3	300	2/0	4/0	3/0	2,4
(46)	855	3 EA 3	4	300	2/0	4/0	3/0	2,4
(47)	1000	3 EA 3.50	3	400	2/0	4/0	3/0	4
(48)	1000	3 EA 3.50	4	400	2/0	4/0	3/0	4
(49)	1140	3 EA 4	3	500	3/0	4/0	3/0	4
(50)	1140	3 EA 4	4	500	3/0	4/0	3/0	4
(51)	1240	4 EA 3	3	350	3/0	4/0	3/0	4
(52)	1240	4 EA 3	4	350	3/0	4/0	3/0	4
(53)	1675	5 EA 3.50	4	400	4/0	4/0	4/0	4
(54)	2010	6 EA 3.50	4	400	250	250	250	4
(55)	2660	7 EA 4	4	500	350	350	350	4
(56)	3040	8 EA 4	4	500	500	500	500	4
(57)	4180	11 EA 4	4	500	500	500	500	4
(58)		5 EA 4						6
(59)		5						6
(60)		10 EA 4						6

CONDUCTOR AND CONDUIT SCHEDULE NOTES

1. CONDUCTORS SHOWN ARE SHOWN FOR EACH CONDUIT WITH MODIFICATIONS AS NOTED IN NOTE 5. ALL CONDUCTORS SHOWN ARE THWN UNLESS OTHERWISE NOTED.
2. PROVIDE EQUIPMENT GROUND CONDUCTORS PER TABLE 250-122 WHEN CIRCUIT BREAKERS ARE SIZED GREATER THAN AMPERE RATING SHOWN IN TABLE.
3. PROVIDE #10 NEUTRALS FOR MULTIWIRED BRANCH CIRCUITS SERVING COMPUTERS.
4. GROUND (G) CONDUCTOR MAY BE DELETED ON SERVICE ENTRANCE CONDUCTORS.
5. WHEN SYMBOL SUBSCRIPT INDICATES "IG", INCLUDE "IG" OR INSULATED GROUND CONDUCTOR SCHEDULED ALONG WITH GROUND EQUIPMENT GROUND CONDUCTOR. WHEN SYMBOL SUBSCRIPT INDICATES "SE", SUBSTITUTE "SE" CONDUCTOR FOR "G" CONDUCTOR SHOWN WHICH IS SIZED FOR THE GROUNDING OF THE SECONDARY OF THE SEPARATELY DERIVED SYSTEMS.
6. RACEWAY ONLY. CONDUCTORS PROVIDED BY UTILITY.



Utah National Guard
New Guard House
CAMP W.G.WILLIAMS, UTAH

SHEET TITLE

Details

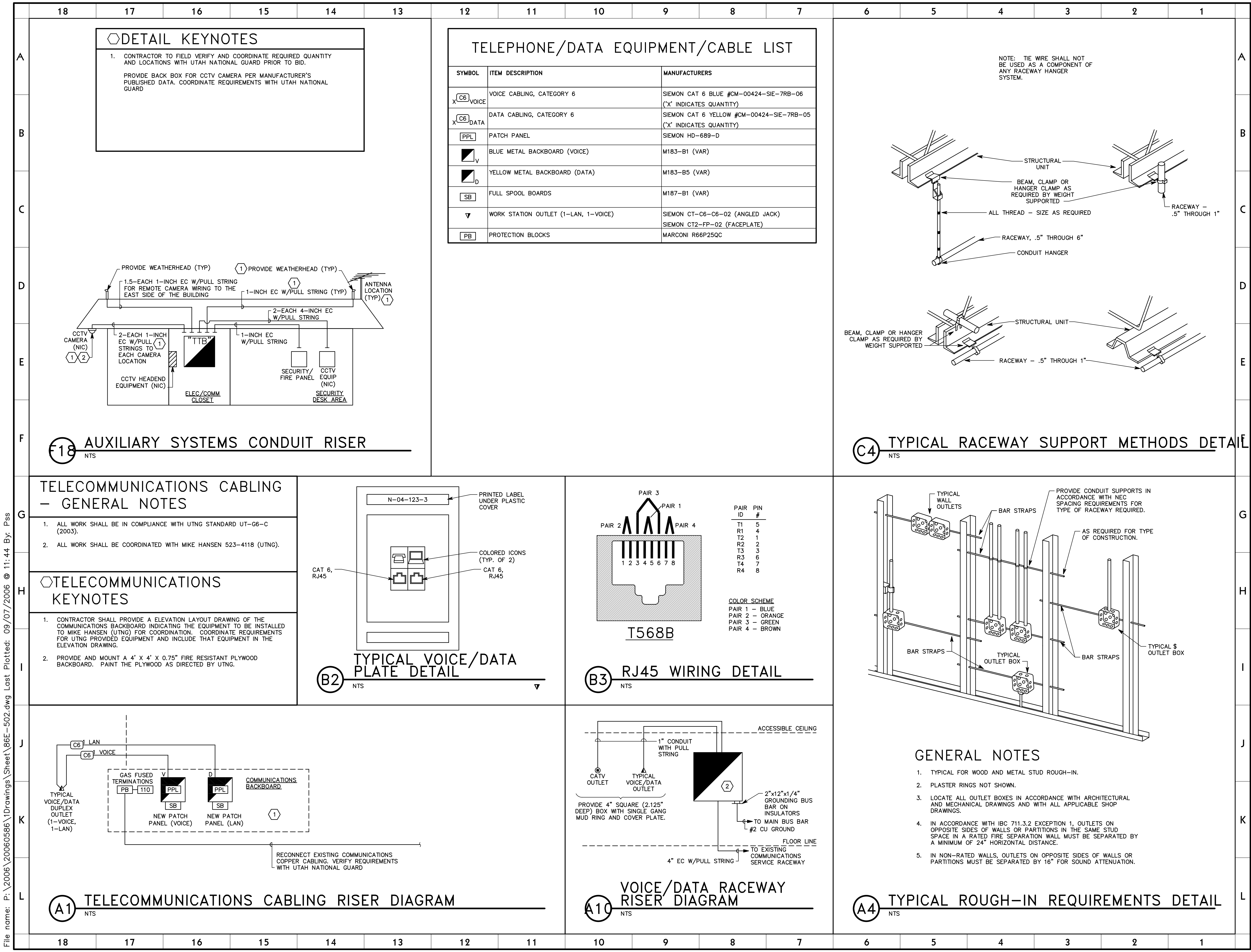
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SHEET TITLE

Details

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DATE	2006-09-07		

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18

17

16

15

14

13

12

11

10

9

8

7

6

5

4

3

2

1

A

B

C

D

E

F

G

H

I

J

K

L

PANEL "1LA"

VOLTS/PHASE/WIRE:
120/208 V, 3 PH 4 WIRE

PANEL SIZE & TYPE:
22" W x 6" D, BOLT-ON

ACCESSORIES:
PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR, SUBFEED LUGS

MAIN SIZE & TYPE:
100 AMPERE MAIN BKR

LOCATION:

CABINET:
SURFACE

NOTES:
22,000 AIC

CTK NO

OCF

LOAD (kVA)

DESCRIPTION

LCL kVA

PHASE LOAD

LCL kVA

DESCRIPTION

LOAD (kVA)

OCF

CTK NO

AMP

POLE

LTG

CO

PWR

A

B

C

LTG

CO

PWR

AMP

POLE

NO

1

20

1

0.4

0.4

TELEPHONE BOARD

0.4

1.2

1.0

LIGHTING/EF-1

0.7

0.1

20

1

2

3

20

1

0.4

TELEPHONE BOARD

0.4

1.4

1.3

FLOOD LIGHTING

1.0

20

1

4

5

30

1

2.5

ELECTRIC WATER HEATER

2.5

2.5

0.0

SPARE

20

1

6

7

20

1

0.2

RESTROOM

0.2

1.6

1.4

TWU-1

1.4

30

2

8

9

20

1

1.0

REFRIGERATOR

1.0

2.4

1.4

1.4

—

—

10

11

20

1

0.2

COUNTER

0.2

0.7

0.5

SEC/FIRE PANEL

0.5

20

1

12

13

20

1

1.0

COFFEE

1.0

1.6

0.8

EXTERIOR LIGHTS

0.6

20

1

14

15

20

1

0.4

BREAK

0.4

0.9

0.5

SPRINKLER CONTROLS

0.5

20

1

16

17

20

1

0.6

EXTERIOR OUTLETS

0.6

1.1

0.5

TV/VCR

0.5

20

1

18

19

20

1

0.6

0.6

ISLAND WIREMOLD

0.6

0.6

0.0

SPARE

20

1

20

21

20

1

0.6

SECURITY DESK WM

0.6

0.6

0.0

SPARE

20

1

22

23

20

1

0.6

SECURITY DESK WM

0.6

0.0

SPARE

20

1

24

25

20

1

0.6

0.6

SECURITY DESK WM

0.6

0.6

0.0

SPARE

20

1

26

27

20

1

0.6

SECURITY DESK WM

0.6

0.6

0.0

SPARE

20

1

28

29

20

1

0.6

SECURITY DESK WM

0.6

0.6

0.0

BLANK

20

1

30

31

20

1

0.4

0.4

SECURITY DESK WM

0.4

0.4

0.0

BLANK

20

1

32

33

20

1

0.2

EXTERIOR OUTLET

0.2

0.2

0.0

BLANK

20

1

34

35

20

1

0.8

GENERAL RECEPTACLES

0.8

0.8

0.0

BLANK

20

1

36

37

20

1

SPARE

0.0

0.0

0.0

BLANK

20

1

38

39

20

1

SPARE

0.0

0.0

0.0

BLANK

20

1

40

41

20

1

SPARE

0.0

0.0

0.0

BLANK

20

1

42

TOTALS:

CONNECTED KVA PER PHASE

6

6

6

CONNECTED TOTAL KVA

18

CONNECTED AMPS PER PHASE

50

51

53

CONNECTED AVERAGE AMPS PER PHASE

51

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING 2kVA @125% =

3 kVA

ALL OTHER LOADS @100% =

9 kVA

DIVERSIFIED TOTAL KVA =

19

RECEPTACLES 7kVA @100% =

7 kVA

25% OF LARGEST MOTOR =

0 kVA

AVERAGE AMPS PER PHASE =

53

REMAINDER 0kVA @ 50% =

0 kVA

STANDARD WIRING DEVICE SCHEDULE

NOTE TO BIDDERS: COMPLY WITH SECTION 16140 OF THE SPECIFICATIONS. THE CATALOG NUMBERS LISTED BELOW HAVE BEEN CAREFULLY PREPARED WITH THE ASSISTANCE OF THE MANUFACTURER'S REPRESENTATIVES WITH THE OBJECTIVE OF ASSISTING THE BIDDERS IN DETERMINING THE QUALITY AND RATINGS OF THE WIRING DEVICE SPECIFIED; HOWEVER, THE CATALOG NUMBERS MAY NOT BE COMPLETE OR ACCURATE. IN ADDITION, THE COLOR OF THE WIRING DEVICE IS NOT INTENDED TO BE DETERMINED BY THE CATALOG NUMBERS LISTED BELOW, BUT SHALL BE SELECTED BY THE ARCHITECT AS INDICATED IN THE SPECIFICATION. EACH MANUFACTURER PRIOR TO BIDDING SHALL COMPARE CATALOG NUMBERS SHOWN WITH THE DESCRIPTION AND SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES.

NEMA

DESCRIPTION

CATALOG NUMBERS

NEMA 5-20R

20A, 125V 2 POLE 3 WIRE DUPLEX GROUNDING RECEPTACLES. NYLON OR LEXAN FACES. BACK AND SIDE WIRED. COMPLY WITH FS W-C-596 AND UL 498.

BRYANT 5352
HUBBELL CR5352
LEVITON 5352
P&S 5352

NEMA 5-20R
GFCI

20A, 125V 2 POLE 3 WIRE DUPLEX FEED THRU GFCI RECEPTACLES WITH INDICATOR LIGHT. NYLON OR LEXAN DECORATOR FACES. BACK AND SIDE WIRED. INTERNAL COMPONENTS SHALL COMPLY WITH FS W-C-596 WHERE APPLICABLE. COMPLY WITH UL 498 AND UL 493.

BRYANT GFR53FT
HUBBELL GF5352
LEVITON 6898
P&S 2091 S

NEMA 5-20R
WATERPROOF
(WEATHERPROOF IN USE)

20A, 125V 2 POLE 3 WIRE DUPLEX GROUNDING RECEPTACLES. NYLON OR LEXAN FACES. BACK AND SIDE WIRED. COMPLY WITH FS W-C-596 AND UL 498. FULLY GASKETED WEATHERPROOF WHILE IN USE ENCLOSURE.

HUBBELL CR5352/5051-0

20A
SINGLE POLE

20A SINGLE POLE 125V-277V STANDARD TOGGLE SWITCH LABELED AS COMPLYING UL STANDARD 20 AND WITH FEDERAL SPECIFICATION W-S-896. PROVIDE NYLON OR LEXAN FACE, BACK AND SIDE WIRED. RATED 1 HP 120V.

HUBBELL CS1221
LEVITON 1221
P&S 521
BRYANT 4903

20A
THREE-WAY

20A SINGLE POLE 125V-277V STANDARD TOGGLE SWITCH LABELED AS COMPLYING UL STANDARD 20 AND WITH FEDERAL SPECIFICATION W-S-896. PROVIDE NYLON OR LEXAN FACE, BACK AND SIDE WIRED. RATED 1 HP 120V.

HUBBELL CS1223
LEVITON 1223
P&S 523
BRYANT 4903

EQUIPMENT SCHEDULE 208Y/120V

MARK

ITEM DESCRIPTION

LOAD DATA

HP

kW

MCA

FLA

VOLT

PH

Hz

WIRE AND CONDUIT SIZE (CC-INDICATES CONDUCTOR AND CONDUIT SCHEDULE)

OVERCURRENT PROTECTION

DISCONNECT SWITCH

FURN BY

SWITCH TYPE

NEMA RATING

FUSED SWITCH

FUSE RATING

FUSE CLASS

CIRCUIT BREAKER

CB

PANEL

RATING

NOTES:
1. LOCATE DISCONNECT ADJACENT TO UNIT.
2. PROVIDE 30-AMP RATED THERMAL OVERLOAD SWITCH.

EF-1

EXHAUST FAN

76W

120

1

60

CC#1

E

THERMAL SWITCH

1

20/1

1LA

HACR

1

EF-1

TWU-1

THRU WALL UNIT

2.8

208

1

60

CC#4

E

30/2

1

YES

20A

RK5

30/2

1LA

HACR

1

TWU-1

WH-1

ELECTRIC WATER HEATER

2.5

120

1

60

CC#4

E

THERMAL SWITCH

1

30/1

1LA

HACR

1.2

WH-1

EQUIPMENT SCHEDULE KEY

E

DIVISION 16

Q

FURNISHED WITH THE EQUIPMENT

*

COORDINATE WITH THE DIVISION 15 TEMPERATURE CONTROL INSTALLER

**

AUTOMATIC CONTROL WIRING BY DIVISION 15

18

17

16

15

14

13

12

11

10

9

8

7

6

5

4

3

2

1

K

L

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CONSULTANT INFORMATION

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FAX 801-328-5155
www.spectrum-engineers.com

Utah National Guard

New Guard House
CAMP W.G.WILLIAMS, UTAH

SHEET TITLE

Schedules

REVISIONS

DATE

BY

DESCRIPTION

△

△

△

△

DRAWN BY

PROJECT NO

DATE

06286480

2006-09-07

CHECKED BY

BRAWING NO

DLA

E-601

EQUIPMENT SCHEDULE KEY

E

Q

*

**

DIVISION 16

FURNISHED WITH THE EQUIPMENT

COORDINATE WITH THE DIVISION 15 TEMPERATURE CONTROL INSTALLER

AUTOMATIC CONTROL WIRING BY DIVISION 15

C:\P\DRAWINGS\CD\PROJECT\86E-601